LONGHORN ARMY AMMUNITION PLANT KARNACK, TEXAS

ADMINISTRATIVE RECORD

CHRONOLOGICAL INDEX

Volume 10 of 25

2007

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Prepared for

Department of the Army
Longhorn Army Ammunition Plant

1976 – 2007

LONGHORN ARMY AMMUNITION PLANT
KARNACK, TEXAS
ADMINISTRATIVE RECORD – CHRONOLOGICAL INDEX

VOLUME 10 of 25

2007

A. Title: Report – Final Installation-Wide Baseline Ecological Risk Assessment Volume I: Step 3 Report and Appendices A through E (continued in next volume)
Author(s): Shaw
Recipient: All Stakeholders
Date: November 15, 2007
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Date:* *November 15, 2007

Project No.:* *117591

TRANSMITTAL LETTER:

To: Mr. Cliff Murray

***Address*:** U.S. Army Corps of Engineers – Tulsa

CESWT-PP-M
1645 South 101st East Ave
Tulsa, Oklahoma 74128

Re: ***Final*** **Installation-Wide Baseline Ecological Risk Assessment Volume 1: Step 3 Report and Volume II: Steps 4 through 8 Report, November 2007**
Longhorn Army Ammunition Plant – Karnack, Texas

Contract No. W912QR-04-D-0027/DS02

For: Review ____ As Requested ____ Approval ____ Corrections ____ Submittal **X** Other ____

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November 15, 2007

DAIM-BD-LO

Mr. Steve Tzhone
US Environmental Protection Agency
Superfund Division (6SF-AT)
1445 Ross Avenue
Dallas, TX 75202-2733

Re: Final Installation-Wide Baseline Ecological Risk Assessment Volume I: Step 3 Report and Volume II: Steps 4 through 8 Report, Longhorn Army Ammunition Plant, Karnack, Texas, November 2007

Dear Mr. Tzhone,

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The point of contact for this action is the undersigned. I ask that David Cobb, Shaw's Project Manager, be copied on any communications related to the project. I may be contacted at 479-635-0110, or by email at rose.zeiler@us.army.mil.

Sincerely,

Rose M. Zeiler

Rose M. Zeiler, Ph.D.
Longhorn AAP Site Manager

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DEPARTMENT OF THE ARMY
LONGHORN ARMY AMMUNITION PLANT
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November 15, 2007

DAIM-BD-LO

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Texas Commission on Environmental Quality
TCEQ Environmental Cleanup Section II MC-221
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Austin, TX 78753

Re: Final Installation-Wide Baseline Ecological Risk Assessment Volume I: Step 3 Report and Volume II: Steps 4 through 8 Report, Longhorn Army Ammunition Plant, Karnack, Texas, November 2007

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The point of contact for this action is the undersigned. I ask that David Cobb, Shaw's Project Manager be copied on any communications related to the project. I may be contacted at 479-635-0110, or by email at rose.zeiler@us.army.mil.

Sincerely,

Rose M. Zeiler

Rose M. Zeiler, Ph.D.
Longhorn AAP Site Manager

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FINAL

INSTALLATION-WIDE BASELINE ECOLOGICAL RISK ASSESSMENT
LONGHORN ARMY AMMUNITION PLANT
KARNACK, TEXAS

VOLUME I: STEP 3 REPORT

Prepared for

U.S. Army Corps of Engineers
Tulsa District
1645 South 101st Avenue
Tulsa, Oklahoma

Prepared by

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Contract Number W912QR-04-D-0027, Task Order No. DS02
Shaw Project No. 117591

November 2007

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Acronyms and Abbreviations

°F	degrees Fahrenheit
95 percent UCL	"a value that, when calculated repeatedly for randomly drawn subsets of site data, equals or exceeds the true mean 95 percent of the time"
ARAMS	Army Risk Assessment Modeling System
Army	U.S. Army
ATSDR	Agency for Toxic Substances and Disease Registry
AUF	area use factor
AWQC	ambient water quality criteria
BAF	bioaccumulation factor
BCF	bioconcentration factor
BEHP	bis(2-ethylhexyl)phthalate
BERA	baseline ecological risk assessment
BF	bioavailability factor
bgs	below ground surface
BRAC	Base Realignment and Closure
BSAF	benthic sediment accumulation factor
CBR	critical body residue
CCME	Canadian Council Ministry for the Environment
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CLI	Caddo Lake Institute
COC	chemical of concern
COPEC	constituent of potential ecological concern
CSM	conceptual site model
dbh	diameter breast height
DDD	dichlorodiphenyldichloroethane
DDE	dichlorodiphenylethylene
DDT	dichlorodiphenyltrichloroethane
DDX	sum of pesticides 4,4'-DDD, 4,4'-DDE, 4,4'-DDT
DNB	dinitrobenzene
DNT	dinitrotoluene
DQO	data quality objective
Eco-SSL	ecological soil screening levels
ED	exposure duration
EEQ	ecological effects quotient
EPC	exposure point concentration
EQC	environmental quality criteria
EQG	environmental quality guideline
ERA	ecological risk assessment
ESL	ecological screening level
ESMSU	Extension Service of Mississippi State University
ESV	ecological screening value
FFA	Federal Facility Agreement
FS	feasibility study

g/day	grams per day
HCB	hexachlorobenzene
HI	hazard index
HMX	explosives
HpCDD	heptachlorodibenzo-p-dioxin
HxCDD	hexachlorodibenzo-p-dioxin
HQ	hazard quotient
HSDB	Hazardous Substances Data Bank
HWIR	Hazardous Waste Identification Rule
IAEA	International Atomic Energy Agency
IRIS	Integrated Risk Information System
Jacobs	Jacobs Engineering Group Inc.
kg	kilograms
kg/day	kilograms per day
Kow	octanol-water partition coefficient
L/day	liters per day
LANL	Los Alamos National Laboratory
LHAAP	Longhorn Army Ammunition Plant
LOAEL	lowest-observed-adverse-effect level
MARC	Multiple Award Remediation Contract
MCL	maximum concentration level
MDC	maximum detected concentration
MDL	method detection limit
mg/g	milligrams per gram
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
mm	millimeter
msl	mean sea level
NOAA	National Oceanic and Atmospheric Administration
NOAEL	no-observed-adverse-effect level
NPL	National Priorities List
OC	organochlorine
ORNL	Oak Ridge National Laboratory
PAH	polynuclear aromatic hydrocarbon
PCB	polychlorinated biphenyl
PCDD	polychlorinated dibenzo-p-dioxin
PCDF	polychlorinated dibenzofuran
PQL	practical quantitation limit
PRG	preliminary remediation goal
RAIS	Risk Assessment Information System
RDX	cyclotrimethylenetrinitramine
RI	remedial investigation
screening ERA	Screening level ecological risk assessment
Shaw	Shaw Environmental, Inc.
SLERA	Screening Level Ecological Risk Assessment
SMDP	scientific/management decision point

SVOC	semivolatile organic compound
T&E	threatened and endangered
TAC	Texas Administrative Code
TAL	target analyte list
TCDD	tetrachlorodibenzo-p-dioxin
TCDF	tetrachlorodibenzofuran
TCEQ	Texas Commission on Environmental Quality
TEC	threshold effect concentration
TEF	toxic equivalency factor
TEQ	toxicity equivalency quotient
TNB	trinitrobenzene
TNRCC	Texas Natural Resource Conservation Commission
TNT	trinitrotoluene
TOC	total organic carbon
TRV	toxicity reference value
TTF	trophic transfer factors
UCL	upper confidence limit
UF	uncertainty factor
UPL	upper prediction limit
USACE	U.S. Army Corps of Engineers
USACHPPM	U.S. Army Center for Health Promotion and Preventive Medicine
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
UST	underground storage tank
UTL	upper tolerance limit
VOC	volatile organic compound
Weston	Roy F. Weston, Inc.
WRS	Wilcoxon Rank Sum
XRF	x-ray fluorescence

Executive Summary

The U.S. Army Corps of Engineers (USACE) contracted Shaw Environmental, Inc. (Shaw), Tulsa District, under the Louisville District's Multiple Award Remediation Contract (MARC) No. W912QR-04-D-0027, Task Order No. DS02, to conduct an installation-wide baseline ecological risk assessment (BERA) to support final decisions at the Longhorn Army Ammunition Plant near Karnack, Texas. The objective of this report is to present the detailed technical approach and results for completion of Step 3 (Problem Formulation) of the U.S. Environmental Protection Agency's (USEPA) eight-step ecological risk assessment (ERA) process. Volume I of this BERA presents the results of Step 3, including selection of final constituents of potential ecological concern (COPECs). Additional information pertaining to the further consideration of these final COPECs will be discussed in more detail in Volume II of this report. This BERA Step 3 Report supersedes and was written based on the *Draft Final Step 3 Report for the Installation-Wide Ecological Risk Assessment, Longhorn Army Ammunition Plant, Karnack, Texas* prepared by Shaw (2004f) for USACE Tulsa District under the Total Environmental Restoration Contract DACA56-94-D-0020. Comment resolution information is provided later in an appendix.

Volume I includes a review of previous studies and existing installation data, and a summary of the screening ERAs, which comprised Steps 1 and 2 of the USEPA eight-step process. The screening ERAs consisted of problem formulation, data analysis, identification of potential ecological receptors, estimates of exposure, characterization of ecological toxicity, and risk characterization. Through this process, the screening ERAs identified a list of COPECs for terrestrial and aquatic receptors. Through the performance of Steps 1 and 2, the risk managers determined that the information presented in the screening ERAs indicated a potential for adverse ecological effects and that a more thorough assessment was warranted.

Volume I presents Step 3 (Problem Formulation) of the USEPA ERA process, which was conducted to establish the goals, breadth, and focus of the BERA. It further characterizes and describes the ecological exposure pathways and receptors of concern at the installation via the development of a conceptual site model, and establishes the assessment endpoints (i.e., specific ecological values to be protected). The conceptual site model for the installation includes the assessment and measurement endpoints and the relationship between exposure and effects. Step 3 discusses the methods used to further characterize the ecological effects of COPECs, and reviews and refines information on COPEC fate and transport, complete exposure pathways, and ecosystems potentially at risk.

The Step 3 evaluation consists of an initial data evaluation and screen against conservative ecological benchmarks and other criteria to identify a list of preliminary COPECs in each ecologically relevant medium (i.e., soil, sediment, and surface water). The potential for these preliminary COPECs to adversely impact the environment was then evaluated using 1) a direct toxicity evaluation, where additional screening comparisons designed to be protective of organisms at the base of the food chain (e.g., plants and soil invertebrates) as well as fish were conducted, and 2) a refined food chain model designed to estimate hazards to selected measurement receptors that represent higher trophic-level organisms. Preliminary COPECs that were identified as potentially problematic using these additional tools were then evaluated in detail on a chemical-by-chemical basis during a COPEC refinement step designed to identify which COPECs represented a real threat to ecological receptors. Additional lines of evidence were examined (e.g., spatial evaluation of chemical detections, analysis of whether the chemical is background-related, etc.), and a determination was made whether the chemical should be considered a final COPEC. Final COPECs are most likely to be site-related and, based on multiple lines of evidence (e.g., direct toxicity evaluation, food chain modeling, etc.), have a reasonable probability of adversely affecting ecological receptors or have significant uncertainty associated with their potential ecological impact. Therefore, these chemicals require further consideration, such as risk management, focused remedial action, additional ecological study, and/or continued monitoring. The final COPECs identified following Step 3 are as follows:

Soil

- Barium in the Waste Sub-Area
- Cadmium in Waste and Industrial Sub-Areas
- Chromium in Waste and Industrial Sub-Areas
- Lead in the Waste Sub-Area
- Zinc in the Industrial Sub-Area
- Trinitrotoluene in the Waste Sub-Area
- Dinitrotoluenes in the Waste Sub-Area
- Dioxin in the Waste Sub-Area
- Perchlorate in the Industrial Sub-Area

Sediment

- Lead in Goose Prairie Creek Watershed
- Mercury in Goose Prairie Creek Watershed
- Silver in Goose Prairie Creek Watershed
- Thallium in Goose Prairie Creek, Central Creek, and Harrison Bayou Watersheds

Surface Water

- No final COPECs were selected for surface water

A summary of Volume II content will be provided in Volume II of this BERA.

1.0 Introduction

This Installation-Wide Baseline Ecological Risk Assessment (BERA) for Longhorn Army Ammunition Plant (LHAAP) has been prepared by Shaw Environmental, Inc. (Shaw) for the U.S. Army Corps of Engineers (USACE), Tulsa District, under the Louisville District's Multiple Award Remediation Contract (MARC) No. W912QR-04-D-0027, Task Order No. DS02. Volume I presents the results of Step 3 (Problem Formulation) in the assessment of ecological risk at LHAAP.

The U.S. Environmental Protection Agency (USEPA) Step 1 and Step 2 screening ecological risk assessments (ERAs) have been completed at LHAAP-16 and the Group 2 and Group 4 sites (Jacobs Engineering Group Inc. [Jacobs], 2001a; 2002a; 2003a). Based on the results of the Step 1 and 2 screening, it was determined that Step 3 would be implemented to determine if unacceptable risk to ecological receptors may be present at LHAAP.

The Step 1 and 2 screening ERAs have been conducted in accordance with the *Final Group 2 Baseline Risk Assessment Work Plan Longhorn Army Ammunition Plant, Karnack, Texas* (Roy F. Weston, Inc. [Weston], 1998) and the *Method of Accomplishment Group 2 Risk Assessment* (Jacobs, 2001c) that cited guidance from the Texas Natural Resource Conservation Commission (TNRCC) Consistency Memorandum (TNRCC, 1998), and were similar to the screening ERA described in *Ecological Risk Assessment Guidance for Superfund: Process for Designing and Conducting Ecological Risk Assessments* (USEPA, 1997a), *Guidelines for Ecological Risk Assessment* (USEPA, 1998a), and *Guidance for Conducting Ecological Risk Assessments at Remediation Sites in Texas* (TNRCC, 2000). The screening ERAs for LHAAP included data and evaluation (i.e., food chain modeling) beyond what is typically provided in a screening ERA. The screening ERAs for LHAAP are provided in the *Final Ecological Risk Assessment, A Supplement to the Remedial Investigation Report Site 16 Landfill, Longhorn Army Ammunition Plant, Karnack, Texas* (Jacobs, 2001a), the *Final Baseline Human Health and Screening Ecological Risk Assessment Report for the Group 2 Sites, Longhorn Army Ammunition Plant, Karnack, Texas* (Jacobs, 2002a), and the *Final Baseline Human Health and Screening Ecological Risk Assessment Report for the Group 4 Sites, Longhorn Army Ammunition Plant, Karnack, Texas* (Jacobs, 2003a).

The Step 1 and Step 2 screening ERAs were conducted on a site-by-site basis. However, ecological receptors that live and forage at LHAAP may move across the installation and may be potentially exposed to constituents of potential ecological concern (COPECs) associated with multiple sites. Ecological exposure may occur on a watershed and community-wide basis and, therefore, for Step 3 (Problem Formulation) the Army is undertaking an installation-wide BERA to address the potential for cumulative risks to terrestrial and aquatic receptors from releases associated with LHAAP.

Volume I of this report presents the technical approach and results for Step 3. The approach for Step 3 has been developed in accordance with the documents listed in **Section 1.1** and generally follows the *Work Plan for the Installation-Wide Ecological Risk Assessment, Longhorn Army Ammunition Plant, Karnack, Texas* (ERA Work Plan*)* (Jacobs, 2003b), as discussed in detailed responses to Agency comments (see **Appendix K**).

1.1 USEPA Eight-Step Process

According to the USEPA (1997a), designing and conducting an ERA is an eight-step process with five scientific/management decision points (SMDPs) (see **Figure 1-1**). The eight steps are:

- **Step 1:** Screening-Level Problem Formulation and Toxicity Evaluation
- **Step 2:** Screening-Level Exposure Estimate and Risk Calculation (followed by SMDP)
- **Step 3:** Problem Formulation (followed by SMDP)
- **Step 4:** Study Design and Data Quality Objectives (DQOs) (followed by SMDP)
- **Step 5:** Verification of Field Sampling Design (followed by SMDP)
- **Step 6:** Site Investigation and Data Analysis (may be followed by SMDP if a change to the Field Sampling Plan is necessary)
- **Step 7:** Risk Characterization
- **Step 8:** Risk Management (followed by SMDP)

The principle guidance documents that were used in conducting this BERA Step 3 Report include:

- *Ecological Risk Assessment Guidance for Superfund: Process for Designing and Conducting Ecological Risk Assessments* (USEPA, 1997a)
- *Guidance for Conducting Ecological Risk Assessments at Remediation Sites in Texas* (TNRCC, 2001)
- *Guidelines for Ecological Risk Assessment* (USEPA, 1998a)
- Ecological Risk Assessment and Risk Management Principles for Superfund Sites (USEPA, 1999b)

1.2 Purpose and Objectives

The purpose of this BERA Step 3 Report is to provide information to support a risk management decision regarding the additional evaluation of ecological risk. Risk managers must decide at the Step 3 SMDP if additional ecological effects or exposure data are necessary to evaluate risk and, if so, how any additional evaluations will be conducted for Steps 4 through 7.

At the end of Step 2, the risk managers determined that the available information presented in the screening ERAs indicated a potential for adverse ecological effects and that a more thorough assessment was warranted.

This Step 3 Report presents the detailed approach to evaluating ecological risk, methods that were followed, and the results obtained. Problem formulation establishes the goals, breadth, and focus of the installation-wide BERA. It also establishes the assessment endpoints or specific ecological values to be protected. Through Step 3, the questions and issues that must be addressed are defined based on potentially complete exposure pathways and ecological effects. Step 3 includes a more detailed approach for identifying COPECs that must be evaluated further by considering additional lines of evidence (e.g., direct toxicity, refined food chain models, comparison to background concentrations, etc.) than those used in the screening ERAs (Steps 1 and 2) to identify those substances that warrant further evaluation.

Elements of Step 3 that have been performed and are presented in Volume I include:

- Environmental setting (habitat mapping)
- Identification and selection of measurement receptors
- Preliminary identification of complete exposure pathways
- Identification of assessment and measurement endpoints
- Development of exposure equations and exposure assumptions
- Refining COPECs (e.g., use of updated benchmarks, developing refined exposure point concentrations [EPCs], identifying uptake factors, area use factors [AUFs], bioavailability factors [BFs], exposure duration [ED] factors, no-observed-adverse-effect level [NOAEL] -based toxicity reference values [TRVs])
- Risk characterization
- Uncertainty analysis
- Refined list of exposure pathways, receptors, and COPECs

Volume II (Steps 4 through 8) will evaluate the final COPECs in more detail, using site-specific data collected at the facility to determine whether or not ecological receptors are likely to be adversely impacted. If so, risk management options will be presented and discussed to address these ecological concerns.

1.3 Facility Description

This section describes the location and history of LHAAP. A discussion of the climate, topography, surface hydrology, geology, and hydrogeology for the facility is included.

1.3.1 Facility Location and History

LHAAP is a formerly government-owned, contractor-operated-and-maintained industrial facility under the jurisdiction of the Army Operations Support Command. A site location map is presented in **Figure 1-2**. The installation is located in central-east Texas in the northeastern corner of Harrison County. The facility occupies 8,493 acres between State Highway 43 at Karnack, Texas, and the western shore of Caddo Lake. The nearest cities are Marshall, Texas, approximately 14 miles to the southwest, and Shreveport, Louisiana, approximately 40 miles to the east. Caddo Lake, located along the Texas-Louisiana state line, is a large freshwater lake that bounds LHAAP to the north and east. Caddo Lake is approximately 51 square miles in size. The eastern fence of LHAAP is approximately 3 miles from the Texas-Louisiana state border. The incorporated community of Uncertain, Texas, and the unincorporated community of Karnack, Texas, are located immediately north and west, respectively, of the installation boundary. The surrounding area is referred to as the Pineywoods of East Texas and is sparsely populated.

LHAAP was established in October 1942 with the primary mission to produce 2,4,6-trinitrotoluene (TNT) flake (Plant 1 Area – within the Industrial Sub-Area). TNT is a yellow, odorless solid that does not occur naturally in the environment. It is an explosive used in military shells, bombs, and grenades, for industrial uses, and for underwater blasting. Monsanto Chemical Company was the first manufacturing contractor-operator of the plant. TNT flake production continued through World War II until August 1945, when Monsanto Chemical Company’s role ended and the plant went on standby status until February 1952. From 1952 until 1956, Universal Match Corporation was the contractor-operator, producing such pyrotechnic ammunition as photoflash bombs, simulators, hand signals, and 40-millimeter (mm) tracers. The Plant 2 Area (within the Industrial Sub-Area) was reportedly the main site of the pyrotechnic operations at LHAAP. During November 1955, Thiokol Corporation began operation of the rocket motor facility (Plant 3 Area – within the Industrial Sub-Area). Thiokol Corporation assumed responsibility for total operation of the plant with the departure of Universal Match Corporation in 1956. Production of rocket motors continued as the primary operation at LHAAP until 1965, when the production of pyrotechnic and illuminating ammunition was reestablished. The status of Thiokol Corporation as contractor-operator was terminated in June 1996.

From September 1988 to May 1991, the installation was also used for the static firing and elimination of Pershing I and II rocket motors. This was done in compliance with the Intermediate-Range Nuclear Force Treaty in effect between the United States and the former Union of Soviet Socialist Republics.

LHAAP was placed on the National Priorities List (NPL) on August 30, 1990. After being placed on the NPL, LHAAP, the USEPA, and the Texas Water Commission (now the Texas Commission on Environmental Quality [TCEQ]) entered into a Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) Section 120 Agreement for remedial activities. The CERCLA Section 120 Agreement, referred to as the Federal Facility Agreement (FFA), became effective December 30, 1991.

In October 1996, approximately 1,435 acres surrounding Harrison Bayou were leased to the Caddo Lake Institute (CLI) for biological and ecological studies by local schools. The installation became inactive and excess to the Army's needs in July 1997. In July 1998, the Army contracted with Earth Tech Inc. to liquidate the salvageable property.

The Army, with the USACE as the designated representative in the FFA, currently owns LHAAP. The USACE has the responsibility to coordinate remediation activities undertaken at LHAAP pursuant to CERCLA with the other FFA parties, USEPA Region 6, and the State of Texas (represented by TCEQ). The Commander's Representative facilitates communication between the USACE and the Army. Concurrent with the CERCLA evaluation and documentation process, LHAAP is undergoing realignment and closure, which is administered by the U.S. Army Base Realignment and Closure Office (BRAC). In October 2000, an agreement was reached between the Army and the U.S. Fish and Wildlife Service (USFWS) to create the Caddo Lake National Wildlife Refuge on LHAAP. Through BRAC, the Army has committed to formally transfer all or part of the property to the USFWS following the completion of the CERCLA process. The Army transferred approximately 5,032 acres to the USFWS on May 5, 2004, and approximately 741 acres were transferred on September 24, 2004.

1.3.2 Climate

LHAAP is situated near the unincorporated community of Karnack, Texas, located in the northeastern region of the state, and is approximately 32 degrees north of the equator. This geographical location produces mild winters and hot summers, with an average relative humidity of 55 percent. In winter, the average temperature is 46 degrees Fahrenheit (°F), and the average daily minimum temperature is 35°F. In summer, the average temperature is 81°F and the average daily maximum temperature is 92°F. Precipitation is uniformly distributed throughout the year, although summer and fall are frequently drought seasons, and December through May are often the wettest months. The total average annual precipitation is 46.9 inches. Snowfalls are infrequent, with an average seasonal snowfall of 1.5 inches.

1.3.3 Topography

LHAAP is characterized by mixed pine-hardwood forests covering gently rolling to hilly terrain that has an average slope of 3 percent toward the northeast. Most of the terrain at LHAAP has slopes of 3 percent or less, but slopes as steep as 12 percent are common in the western and northwestern portions of the installation and along the Harrison Bayou floodplain. Land surrounding the installation is a mixture of forest and agricultural land. Ground surface elevations at LHAAP vary from 169 feet above mean sea level (msl) at Caddo Lake to 335 feet msl.

1.3.4 Surface Hydrology

Surface water at LHAAP drains northeastwardly into Caddo Lake via four drainage systems: Saunders Branch, Harrison Bayou, Central Creek, and Goose Prairie Creek (**Figure 1-3**).

Caddo Lake is part of Big Cypress Bayou. The boundary of the installation along Caddo Lake is determined by the 169.27-foot lake elevation. Saunders Branch flows onto LHAAP near the southeastern corner of the installation and flows northward into Caddo Lake. Approximately 11 percent of the heavily wooded eastern section of the installation is drained by this system. Harrison Bayou enters LHAAP on the southern edge of the installation. The bayou carries 30 percent of the surface drainage of LHAAP and bisects the installation in a northeasterly direction. Central Creek enters LHAAP on its western edge just south of the town of Karnack, Texas. Approximately 29 percent of the surface drainage from the installation is carried to Caddo Lake via this drainage course. The headwaters of Goose Prairie Creek are located near the northwestern corner of the installation and consist of one larger creek and several smaller tributaries. Goose Prairie Creek flows across the northern edge of the installation and drains approximately 30 percent of LHAAP.

First created by a natural logjam on Big Cypress Bayou before recorded history, Caddo Lake is currently maintained by Caddo Dam in Caddo Parish, Louisiana. The original dam was constructed in 1914 for local navigation purposes and was reconstructed in 1971. The spillway elevation of the lake is 168.9 feet. Twelve Mile Bayou resumes east of Caddo Lake and joins the Red River at Shreveport, Louisiana. The Red River flows southeast across Louisiana and joins the Mississippi River at Simmesport, Louisiana.

1.3.5 Geology

The subsurface geology at LHAAP consists primarily of a thin veneer of Quaternary alluvium mantling Tertiary Age formations of the Wilcox and Midway groups. Underlying these are Cretaceous Age formations of the Navarro and Taylor groups.

The stratigraphic thickness of the Wilcox Group ranges from a maximum 350 feet in the northwestern corner of LHAAP to approximately 130 to 140 feet along the eastern side of the facility near Caddo Lake. The Wilcox Group constitutes the majority of the unconsolidated sediments underlying the LHAAP facility. It consists of interbedded fine- to medium-grained sand, silt, and clay that is light gray, red, brown, and/or tan and contains occasional seams of lignite. This undifferentiated group of Eocene Age was deposited in a regressive fluvial-deltaic and transgressive marine environment that leads to considerable heterogeneity across the facility (Jacobs, 2001b).

According to boring logs generated during monitoring well construction, the unconsolidated sediments of the Wilcox Group typically consist of a series of three sandy water-bearing zones separated by silty clay, semi-confining layers. The uppermost portion of the Wilcox Group at LHAAP consists of medium plastic sandy silts and clays ranging in thickness from approximately five to fifteen feet. These surficial sediments are underlain by the first, or shallow, saturated sand zone, which ranges in thickness from 10 to 20 feet. This sand zone consists of silty fine sand containing some silt and clay lenses and is at first dry to moist and then generally becomes saturated at 15 to 20 feet below ground surface (bgs). A 5- to 20-foot-thick medium- to highly-plastic silt and clay layer underlies the shallow saturated sand zone. An intermediate saturated sand zone, consisting of a fine to medium silty sand, is then encountered below the semi-confining layer at 30 to 50 feet bgs. The intermediate saturated sand zone is generally less silty than the shallow saturated sand zone and exhibits a higher hydraulic conductivity.

A silt to silty clay layer is encountered beneath the intermediate saturated sand zone and ranges in thickness from 5 to 30 feet. Underlying this silt to silty clay layer, a massive, homogeneous silty, clayey, fine sand is encountered at depth and continues to the top of the underlying Midway Group formation.

The Midway Group (tertiary), which underlies the Wilcox Group, is generally encountered at approximately 200 to 300 feet bgs and is a thick, calcareous to non-calcareous clay containing some sand. The exact thickness of the Midway Group is difficult to determine because it cannot be readily differentiated from the underlying upper Navarro Group (Upper Cretaceous). The Midway and Wilcox groups tend to form the base of the overlying Eocene aquifer system, effectively isolating it from the deeper flow systems (Fogg and Kretler, 1982).

1.3.6 Hydrogeology

Groundwater and geologic data obtained during the remedial investigation (RI) field activities at LHAAP indicate varying degrees of heterogeneity within the subsurface hydrogeology across the facility. This is indicative of the fluvial-deltaic type depositional environment of the Wilcox Group sediments that underlie the LHAAP. The unconsolidated sediments of the Wilcox Group are comprised primarily of elongated, interconnected, channel-fill sand deposits within alluvial belts interbedded with less permeable interchannel sediments. These interbedded, less permeable deposits tend to form aquitards that limit the flow between the saturated zones. LHAAP can generally be characterized as consisting of three water-bearing zones within the Wilcox Group deposits: a shallow saturated sand zone, an intermediate saturated sand zone, and a deep saturated sand zone separated by semi-confining clay aquitard units. These three water-bearing units overlay the relatively impermeable Midway Group. This characterization is based on boring logs, Site Characterization and Analysis Penetrometer System data, down-hole geophysics, and hydrogeology.

Groundwater generally occurs under semi-confined to confined conditions within the Wilcox Group deposits that make up the primary aquifer material underlying the installation. Perched and local confining conditions frequently occur within these Wilcox Group deposits due to the high clay content and highly variable stratigraphy. Due to this high degree of heterogeneity within the installation, the level of interconnection between the shallow, intermediate, and deep water-bearing zones identified in the Wilcox Group deposits is highly variable. The base of the Wilcox water-bearing zones beneath LHAAP is defined by the contact of the Wilcox Group with the underlying Midway Group. The Midway Group consists predominantly of very low permeability clay that yields little or no water. The Wilcox Group is considered the base of fresh water in the area.

The depth to groundwater across the installation ranges from 1 to 70 feet bgs, with the typical depth being 12 to 16 feet. The regional groundwater flow direction beneath the installation is generally east-northeast toward Caddo Lake, but this varies by site location. Based on rising head hydraulic conductivity tests (slug tests) executed on the LHAAP monitoring wells, the installation-wide range of hydraulic conductivities varies from 4.54×10^{-3} to 3.5×10^{-7} centimeters per second.

1.3.7 Ecology

The LHAAP has a variety of ecological habitats that support a wide variety of floral and faunal species. The terrestrial and aquatic ecological habitats that are distributed throughout LHAAP are discussed in greater detail in **Section 3.0**.

LHAAP is part of the Cypress Bayou Basin and occurs within the Pineywoods ecological region of Texas (CLI, 1995). The Pineywoods is a deep inland extension of the Gulf Coastal Plain that extends into Texas, Louisiana, Arkansas, and Oklahoma. Vegetation at the installation is dominated by mixed pine-hardwood forests that cover gently rolling to hilly terrain (USACE, 1992). Soil conditions at LHAAP range from moist to wet. The majority of soils is hydric or has hydric inclusions. Soils have good water-holding capacity. Uplands are broad and mostly flat. Elevation differences between uplands and bottomlands are small. The installation elevation ranges from 169 to 335 feet above msl. This topography, as well as the mild temperatures and ample rainfall in the area, supports an abundant and diverse plant community and provides a great diversity of habitats on the installation, including mesic slopes, mesic creek bottoms, bottomland flats, wetlands, forests, and grasslands. The diversity of vegetation and habitats at the installation support a large number of animal species.

LHAAP is forested primarily with loblolly and shortleaf pines, as well as a variety of oaks, sweet gum, black tupelo, ash, bald cypress, and a few scattered willows. Pines predominate throughout the installation. Most of the LHAAP woodlands were managed to improve pine harvest for lumber. In many areas of the installation, oaks and other trees were killed to encourage further pine growth (USACE, 1992).

Terrestrial and aquatic habitat types on LHAAP and a listing of birds, mammals, reptiles and amphibians, and threatened and endangered (T&E) species known or potentially present at LHAAP are further discussed in **Section 3.0**.

1.3.8 Investigated Areas

A listing of the 18 individual source areas (and their approximate sizes) studied during the RI activities is provided below. (See **Section 2.0** for specific details of the data that are included in the installation-wide ERA.)

- LHAAP-04 – Pilot Wastewater Treatment Plant – 1.4 acres
- LHAAP-08 – Sewage Treatment Plant – 2 acres
- LHAAP-12 – Landfill – 7 acres
- LHAAP-16 – Old Landfill – 20 acres
- LHAAP-17 – Burning Ground No. 2 (Flashing Area) – 2.6 acres
- LHAAP-18/24 – Burning Ground No. 3 / Unlined Evaporation Pond – 34.5 acres
- LHAAP-29 – Former TNT Production Area – 85 acres
- LHAAP-32 – Former TNT Waste Disposal Plant – 9 acres
- LHAAP-35A (58) – Shop Area – 15 acres
- LHAAP-35B (37) – Chemical Laboratory – 8 acres
- LHAAP-35C (53) – Static Test Area – 26 acres
- LHAAP-46 – Plant 2 Area – 190 acres
- LHAAP-47 – Plant 3 Area – 275 acres
- LHAAP-48 – Y-Area – 16 acres
- LHAAP-49 – Acid Storage Area – 19.5 acres
- LHAAP-50 – Former Sump Water Tank – 1 acre
- LHAAP-60 – Pesticide Storage Buildings – <1 acre
- LHAAP-67 – Aboveground Storage Tank Farm – 12 acres

The Pistol Range, located in the Waste Sub-Area, was investigated and sampled in February 2006. This site is approximately 0.4 acres in size. Results from this sampling are considered in **Section 10.1.6.2**.

Other sites previously investigated but not evaluated further during the RI (and are not specifically addressed during the installation-wide ERA) include:

- LHAAP-XX – (Formerly Site 54) Ground Signal Test Area
- LHAAP-01 – Inert Burning Grounds
- LHAAP-11 – Suspected TNT Burial Site
- LHAAP-13 – TNT Burial Site/Acid Dump
- LHAAP-14 – Area 54 Burial Ground
- LHAAP-27 – South Test Area
- LHAAP-52 – Magazine Washout Area
- LHAAP-63 – Former Burial Pits

These sites had previously been assigned to Group 1 (LHAAP-XX, LHAAP-01, LHAAP-11, and 27), Group 3 (LHAAP-13 and LHAAP-14), and Group 5 (LHAAP-52, LHAAP-63). Environmental investigations were completed for these Groups, with the determination that no further action was required for the sites within the Groups (Letter from Chris Villareal) (USEPA, 1998c); (Letter from TNRCC) (TNRCC, 1995); (Letter from W.K. Honker) (USEPA, 1998d).

Drainages that are potentially impacted by source areas and have been investigated during the RI and further evaluated during the installation-wide ERA include:

- Harrison Bayou
- Goose Prairie Creek
- Central Creek
- Saunders Branch

1.3.9 Organization of Investigated Areas for Step 3 Evaluation

The LHAAP data were sorted into subsets based on known evidence of impact. For purposes of the installation-wide ERA, the installation has been divided into four sub-areas based on existing information regarding the potential for ecological impacts. Three of the sub areas discussed in this section are Industrial, Waste, and Low Impact. The definition of sub-areas provides an approach for focusing the refinement of COPECs and future ecological field activities, if necessary. Three terrestrial sub-areas were identified based on the level and type of contamination known to be present: Industrial Sub-Area, Waste Sub-Area, and Low Impact Sub-Area (**Figure 1-4**). The fourth area is the Reference Sub-Area.

Existing information on the levels of contamination, site history, and geographic distribution was used to identify two sub-areas of greater concern. The Industrial Sub-Area and Waste Sub-Area generally correspond to the contaminated sites included within the Site 16, Group 2, and Group 4 RI reports. These sites were apportioned into two sub-areas based on COPEC concentration data, and because they are the two centers of contamination at the installation separated by an area of relatively low concern for contamination (i.e., the Low Impact Sub-Area).

The geographic extent of the Industrial Sub-Area shown on **Figure 1-4** was defined by the historically active industrial land use area of LHAAP and information developed during the RI. The Industrial Sub-Area is approximately 2,330 acres in size, and has potential for common releases of hazardous wastes and materials from the general types of activities historically performed at LHAAP. Historical activities in the Industrial Sub-Area include TNT production, wastewater and sewage treatment, shop, chemical laboratory, test areas, pyrotechnic/rocket motor production, and pesticide storage. During the RI, multiple samples of environmental media were collected across this installation and it was determined that several locations had concentrations of COPECs from anthropogenic sources. The Industrial Sub-Area consists of the following sites:

- LHAAP-04 – Pilot Wastewater Treatment Plant – 1.4 acres
- LHAAP-08 – Sewage Treatment Plant – 2 acres
- LHAAP-29 – Former TNT Production Area – 85 acres
- LHAAP-32 – Former TNT Waste Disposal Plant – 9 acres
- LHAAP-35A (58) – Shop Area – 15 acres
- LHAAP-35B (37) – Chemical Laboratory – 8 acres
- LHAAP-35C (53) – Static Test Area – 26 acres
- LHAAP-46 – Plant 2 Area – 190 acres
- LHAAP-47 – Plant 3 Area – 275 acres
- LHAAP-48 – Y Area – 16 acres
- LHAAP-49 – Acid Storage Area – 19.5 acres
- LHAAP-50 – Former Sump Water Tank – 1 acre
- LHAAP-60 – Pesticide Storage Buildings – less than 1 acre
- LHAAP-67 – Aboveground Storage Tank Farm – 12 acres

The geographic extent of the sites comprising the Waste Sub-Area is shown on **Figure 1-4**. This is defined by the areas where waste disposal activities occurred. The Waste Sub-Areas is approximately 486 acres and, as with the Industrial Sub-Area, has a potential for common releases of hazardous wastes and materials from the general waste disposal activities at LHAAP. Sites with historical disposal activities in the Waste Sub-Area include landfills, burning grounds, and an evaporation pond. During the RI, multiple samples of environmental media were collected across the Sub-Area and it was reported that several areas within the sub-area had concentrations of COPECs from anthropogenic sources. The Waste Sub-Area consists of the following sites:

- LHAAP-12 – Landfill – 7 acres
- LHAAP-16 – Old Landfill – 20 acres
- LHAAP-17 – Burning Ground No. 2 (Flashing Area) – 2.6 acres
- LHAAP-18/24 – Burning Ground No. 3/Unlined Evaporation Pond – 34.5 acres

The third sub-area, Low Impact Sub-Area, contains approximately 3,217 acres and generally corresponds to the remaining areas at LHAAP where anthropogenic activities are known to have occurred but where no routine production operations occurred or wastes were handled. The Low Impact Sub-Area generally includes those portions of LHAAP that are not included in the Industrial and Waste Sub-Areas or within the Reference Sub-Areas. Geographic areas between the study sites within the Industrial and Waste sub-areas are also included in the Low Impact Sub-Area. Although the Low Impact Sub-Area was not commonly used for waste disposal practices or for industrial land uses, the area is not free of historical disturbances due to its proximity to the study sites comprising the Industrial and Waste Sub-Areas. The Low Impact Sub-Area contains the following sites that have been previously investigated resulting in little or no impact and, therefore, not evaluated further during the RI:

- LHAAP-XX – (formerly Site 54) – Ground Signal Test Area
- LHAAP-01 – Inert Burning Grounds – 1.5 acres
- LHAAP-11 – Suspected TNT Burial Site
- LHAAP-13 – TNT Burial Site/Acid Dump
- LHAAP-14 – Area 54 Burial Ground
- LHAAP-27 – South Test Area
- LHAAP-52 – Magazine Washout Area
- LHAAP-63 – Former Burial Pits

The final sub-area of LHAAP located in three separate land parcels in the western and southeastern portions of the installation has been identified as a background or reference sub-area based on current information. This Reference Sub-Area, which is separated into the Western and Southern Reference areas, was selected as a representative area of the installation that has not been significantly affected anthropogenic activities. The Reference Sub-Area was intended to provide a comparison or control for the purposes of determining if biological impacts to organisms were occurring at significantly different levels on affected property compared with an area where little or no previous site-related activities took place. Thus, the Reference Sub-Area was selected to be as similar as possible to the installation in all aspects except that contamination was not expected to be present. Parameters that were compared to the rest of the installation when the designation of the Reference Sub-Area took place included slope, habitat, species potentially present, soil and sediment characteristics, sediment particle size, total organic carbon (TOC), and for surface water, flow rates, substrate type, water depth, temperature, turbidity, oxygen levels, water hardness, pH, and other standard water quality parameters. The Reference Sub-Area was not evaluated during Step 3.

Potential hazards to Caddo Lake (**Section 4.1.2**) will be evaluated qualitatively using hazard estimate results for Goose Prairie Creek, Harrison Bayou, Central Creek, and Saunders Branch that drain into the Lake.

1.3.10 Chemicals Potentially Related to Installation Operations

Some chemicals that may be related to historical operations at LHAAP are presented below. This list is not intended to be an exhaustive compilation of all chemicals that might be related to the legacy of the installation, but rather presents some possible sources for some chemicals identified as potential risk drivers during the screening ERAs. Information from potential uses of these chemicals at LHAAP was obtained from the *Environmental Site Assessment Phase I and II Report* (Plexus Scientific, 2005).

- **Aluminum**: Aluminum powder was used as a component of solid fuel in rocket motors.
- **Antimony**: Antimony sulfide was used in the manufacture of primers and delay assemblies.
- **Barium**: Used as an oxidizer in the manufacture of illumination devices (as barium chromate and barium nitrate).
- **Chromium**: Used in the manufacture of handheld signals and illuminating projectiles (e.g., barium chromate, lead chromate) as a component of red phosphorus smoke wedges.
- **Lead**: Present in many industrial components, such as batteries and paints. Used in process components (e.g., lead thiocyanate in fuze primers, lead styphnate in trip flares, and lead chromate in delay assemblies).
- **Mercury**: Metallic mercury was used in instrument gauges at the laboratories where quality of ingredients was tested.
- **Manganese:** Used in the delay assembly of 155 mm illuminating projectiles.
- **Silver:** Used in photographic laboratory.
- **2,4,6-TNT**: Used in the manufacture of munitions. Manufactured at the installation.
- **2,4-Dinitrotoluene (DNT)**: Used in the manufacture of munitions and is a breakdown product of TNT.
- **1,3,5-Trinitrobenzene (TNB)**: Used in the manufacture of munitions.

- **HMX**: Used in the manufacture of munitions.
- **Perchlorate**: Used as a rocket fuel component (oxidizer).
- **Hexachlorobenzene (HCB)**: Used as an ingredient of pyrotechnics in aircraft signal production.

In addition to these process-related chemicals, many chemicals are expected to be present at LHAAP as the result of general industrial processes, e.g., cadmium associated with paint, zinc associated with galvanized iron, lawfully applied pesticides, etc.

1.4 Organization of the BERA Step 3 Report

The remaining portions of the BERA Step 3 Report are provided as follows:

- **Section 2.0—**Summary of Previous Studies
- **Section 3.0—**Problem Formulation (Step 3) Introduction
- **Section 4.0—**Exposure Pathways and Ecosystems at Risk
- **Section 5.0—**Ecological Endpoints Identification
- **Section 6.0—**Identification of Contaminants of Potential Ecological Concern
- **Section 7.0—**Risk Characterization and Risk Estimation
- **Section 8.0—**Uncertainty Analysis
- **Section 9.0—**Refined Exposure Pathways and Receptors
- **Section 10.0—**Refined List of COPECs
- **Section 11.0—**Revised Conceptual Site Model, Risk Questions, and Scientific/Management Decision Point

References for this report are found in Section 17.0 of Volume II: Steps 4 through 8 Report.

Appendices to this report include the following:

- **Appendix A—**TCEQ Bioaccumulative Chemicals for the Step 3 Ecological Risk Assessment
- **Appendix B—**TrophicTrace® Model Results
- **Appendix C—**Critical Body Residues for Bioaccumulation Risk Estimates in Fish
- **Appendix D—**Small Mammal Bio-Uptake Study
- **Appendix E—**Food Chain Model Results
- **Appendix F—**Ecological Background Evaluation
- **Appendix F-1—** Background Evaluation of Lead in Surface Water
- **Appendix G—**Results from Recently Collected Surface Water and Sediment Data Gap Samples
- **Appendix H—**Potential Risk Drivers

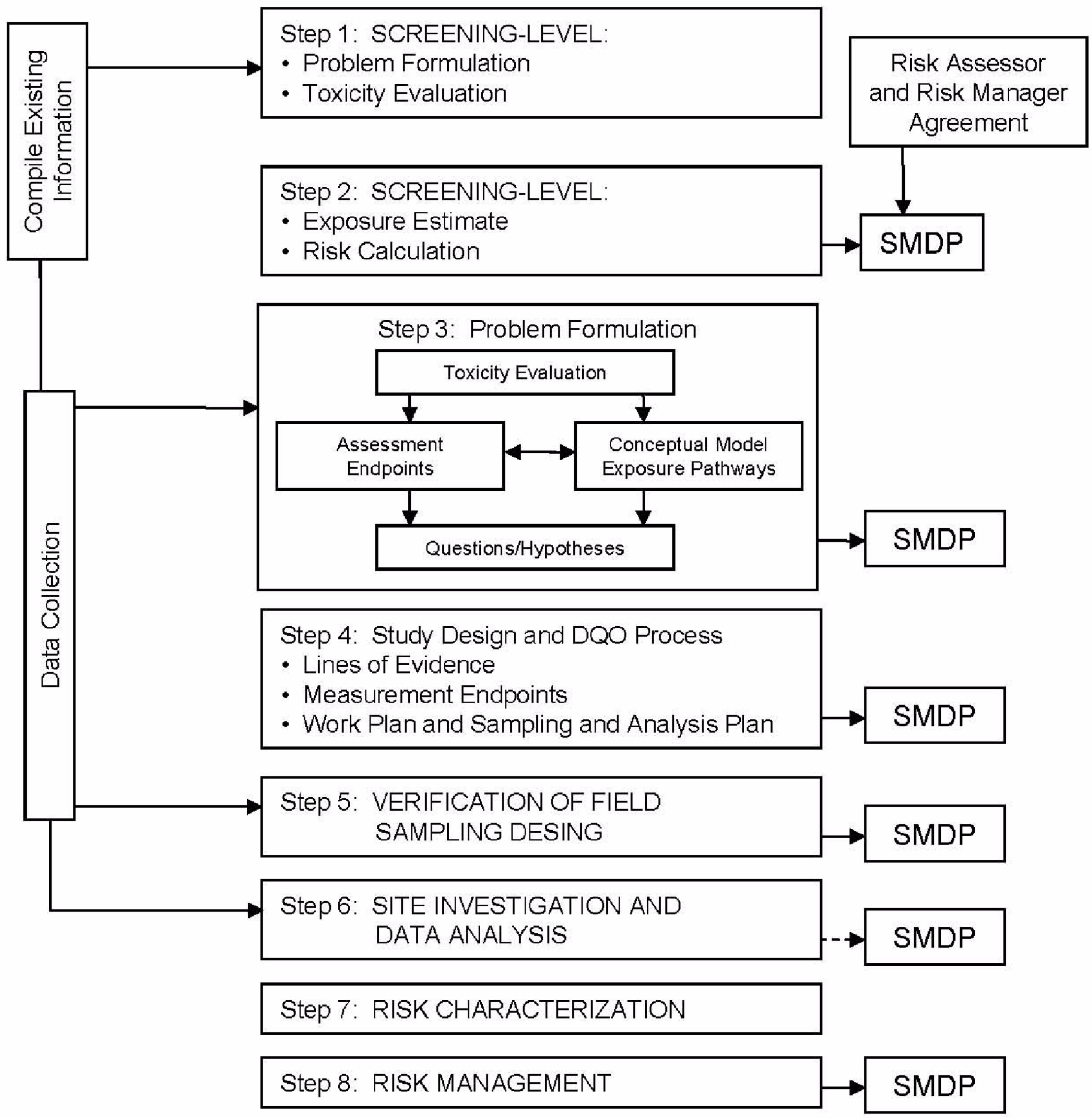
- **Appendix I—**Geochemical Correlation Coefficients
- **Appendix J-1—**Perchlorate Surface Water Benchmark Evaluation
- **Appendix J-2—**Perchlorate TRV Derivation (Birds and Mammals)
- **Appendix K—**Comment Resolution Information

A data report is provided separately on a compact disk as **Exhibit 1**.

1.5 Scope (Overview) of ERA Process

Volume I present the approaches and results of Step 3. Volume II presents the approach and results of Steps 4 through 8. An installation-wide background study (Shaw 2004a; 2004b) was initiated by the USACE to support the installation-wide BERA. Results of this study are used at the end of Step 3. **Figure 1-5** shows the expected BERA process for LHAAP.

Figure 1-1
Eight-Step Ecological Risk Assessment Process for Superfund



SMDP = Scientific management decision point
Source:
U.S. Environmental Protection Agency (EPA), 1997, Ecological Risk Assessment Guidance for Superfund: Process for Designing and Conducting Ecological Risk Assessments, Interim Final, EPA/540/R-97/006.

OFFICE	DRAWN BY	CHECKED BY	APPROVED BY	FILE PATH
Houston, TX	B. Lu 12/04/06	J. Lindberg 12/04/06	K. Everett 12/04/06	T:\GIS\LHAAP\MXD\Step3Eco\FigsFromPP\Fig1-1.mxd

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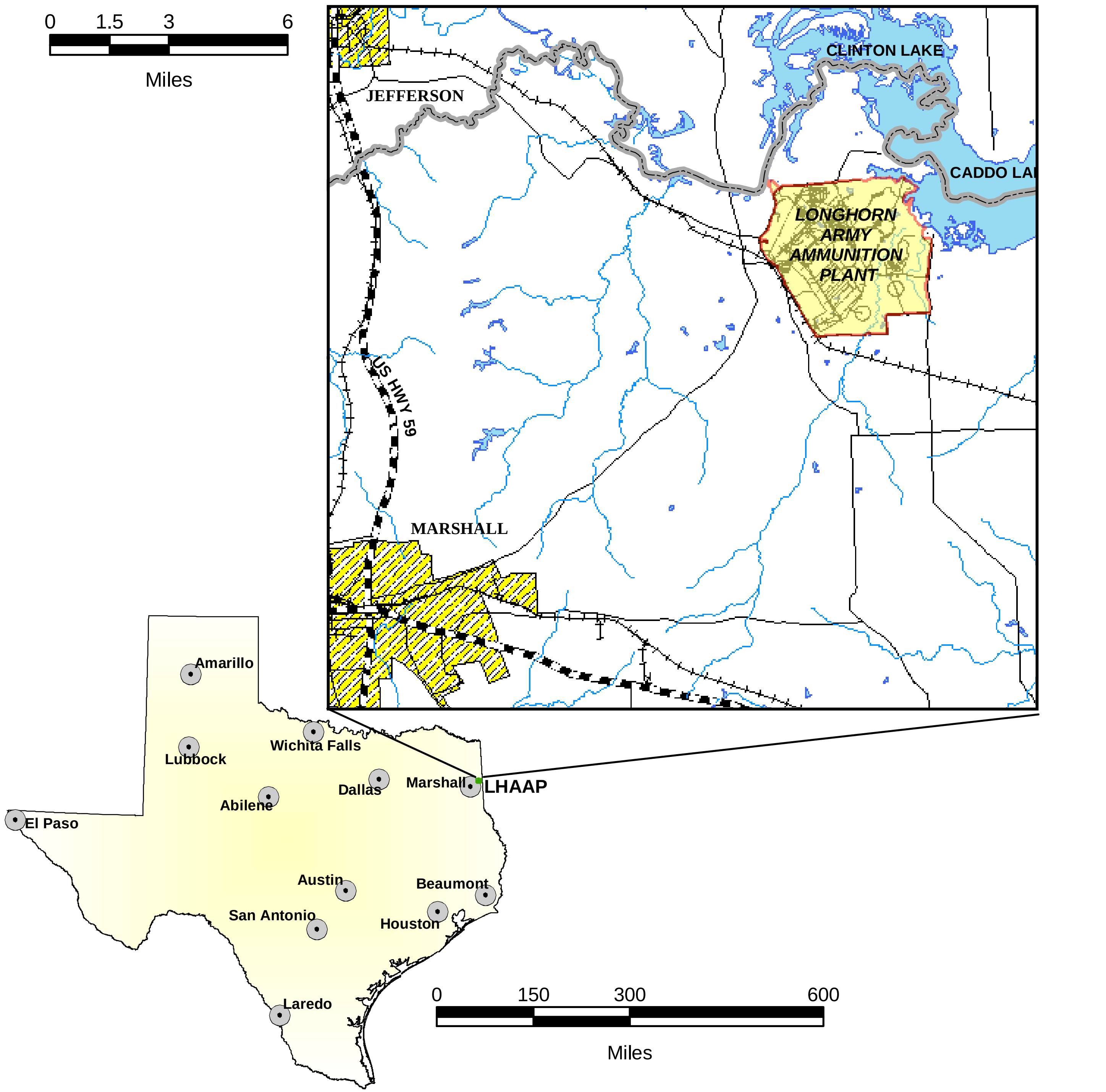
U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT
TULSA, OKLAHOMA

FIGURE 1-1

EIGHT-STEP ECOLOGICAL RISK ASSESSMENT PROCESS FOR SUPERFUND

LONGHORN ARMY AMMUNITION PLANT
KARNACK, TEXAS

00049582



Legend

- Major Texas City
- Road
- Railroad
- Creek/River
- City/Municipal Boundary
- Water Body
- County Boundary
- Longhorn Army Ammunition Plant Appoximated Boundary

N
W E
S

Shaw

U.S. Army Corps of Engineers
Tulsa District
Tulsa, Oklahoma

Figure 1-2

Longhorn Army Ammunition Plant

Karnack, Texas

APPROVED BY: P.Srivastav 10/05/04

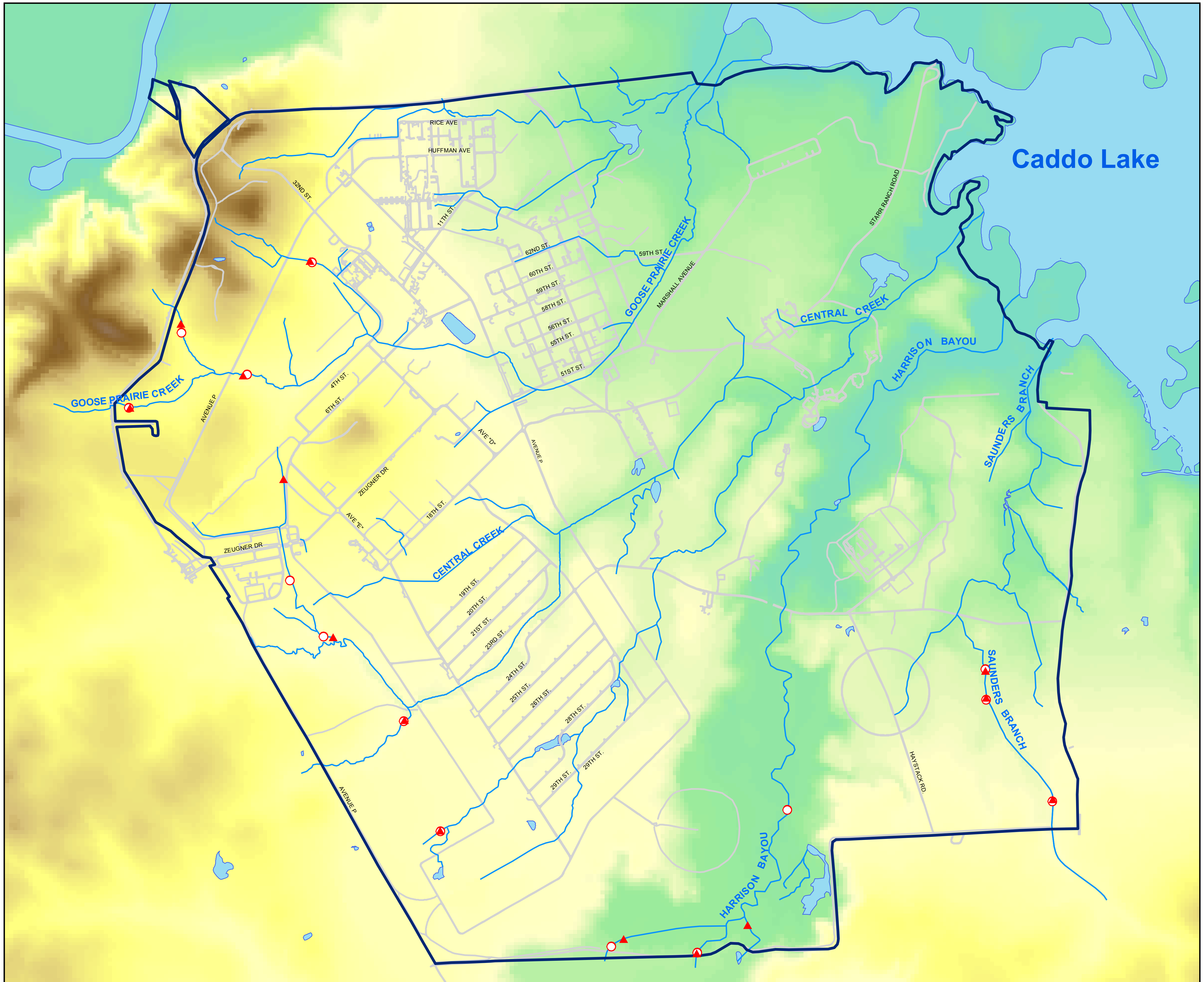
CHECKED BY: B.Lu 10/05/04

COMPILED BY: S.Brown 10/5/04

OFFICE: Houston, TX

FILE LOCATION: seiknxgis00/longhorn/gisworkspace/mxd/1-2_LHAAP.mxd

PLOT DATE: 04/26/04
REVISION FORMAT: 10/05/04



Legend

- ▲ Background Surface Water Sample Location
- ○ Background Sediment Sample Location
- Creek/Bayou
- Road
- Water Body
- Longhorn Army Ammunition Plant Approximated Boundary

N
W E
S

0 1,000 2,000 4,000 6,000

State Plane Feet

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U.S. Army Corps of Engineers
Tulsa District
Tulsa, Oklahoma

Figure 1-3

LHAAP Surface Water Drainages

Longhorn Ammunition Plant
Karnack, Texas

APPROVED BY	CHECKED BY	COMPILED BY	OFFICE	FILE LOCATION
P.SRIVASTAV 11/27/04	B.LU 11/27/04	S.BROWN 11/27/04	Houston, TX	seiknxgis00/longhorn/gisworkspace/mxd/1-3_surface_water.mxd

PLOT DATE: 04/26/04
REVISION FORMAT: 11/28/04

00049584

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Houston, TX	S.BROWN 11/27/04	B.LIU 11/27/04	P.SRIVASTAV 11/27/04

FILE LOCATION: seiknxgis00/longhorn/gisworkspace/mxd/1-4_sub_areas.mxd

PLOT DATE: 04/26/04
REVISION FORMAT: 11/28/04

Legend

- Background Soil Sample Location
- Creek/Bayou
- Road
- Sub-Area and Reference Area
- Longhorn Army Ammunition Plant Approximated Boundary
- Water Body

N W E S

0 1,000 2,000 4,000 6,000

State Plane Feet

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U.S. Army Corps of Engineers
Tulsa District
Tulsa, Oklahoma

Figure 1-4

LHAAP Terrestrial Sub-Areas

Longhorn Ammunition Plant
Karnack, Texas

00049585

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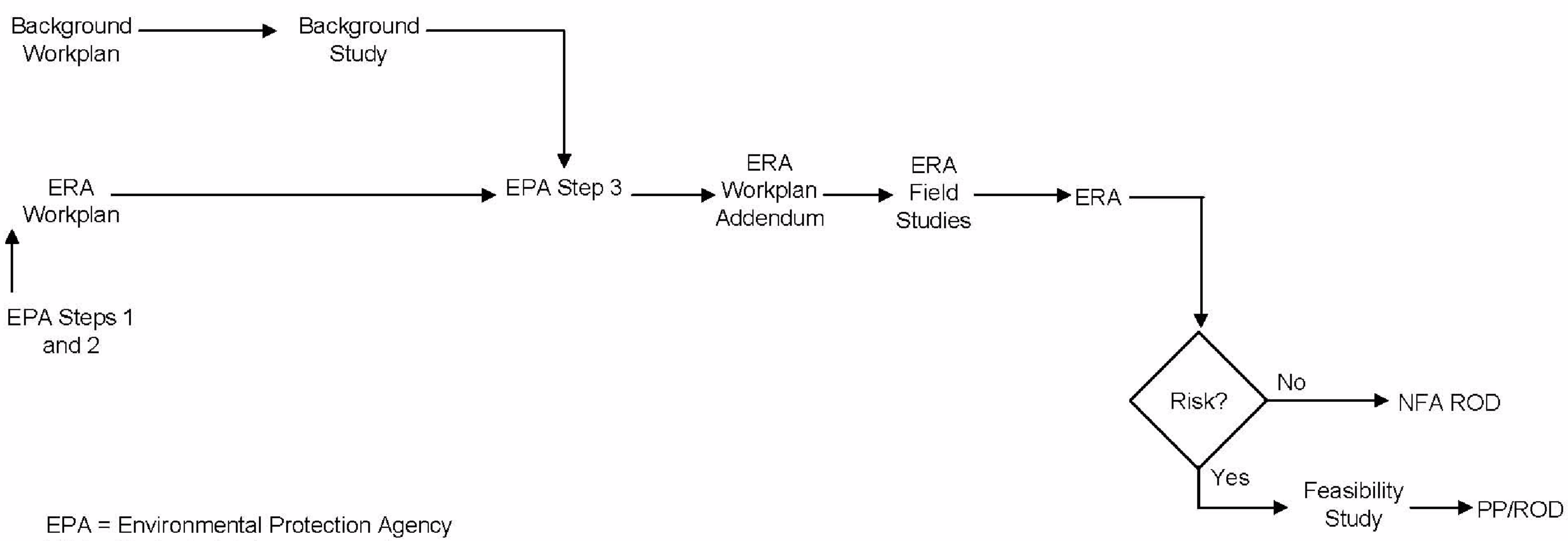
Houston, TX	*B. Lu*	*12/04/06*	*J. Lindberg*	*12/04/06*	*K. Everett*	*12/04/06*	*T:\GIS\LHAAP\MXD\Step3Eco\FigsFromPP\Fig1-5.mxd*

Figure 1-5
LHAAP Ecological Risk Assessment
Decision Documentation



EPA = Environmental Protection Agency
ERA = Ecological risk assessment
NFA = No further action
ROD = Record of decision
PP/ROD = Proposed plan/record of decision

Shaw

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT
TULSA, OKLAHOMA

FIGURE 1-5

LHAAP ECOLOGICAL RISK ASSESSMENT
DECISION DOCUMENTATION

LONGHORN ARMY AMMUNITION PLANT
KARNACK, TEXAS

2.0 Summary of Previous Studies

Section 2.0 presents a summary of previous studies that generated data used for completion of the installation-wide ERA at LHAAP. Specifically, a review of existing installation data, other studies currently being completed at LHAAP, and a summary of the Steps 1 and 2 screening ERAs are presented.

2.1 Review of Existing Installation Data

Site investigations to assess the environmental quality of LHAAP concerning the past use, storage, treatment, and disposal of toxic and hazardous materials began during the 1970s as part of the U.S. Army Installation Restoration Program. The U.S. Army Environmental Hygiene Agency conducted the early studies. The U.S. Army Toxic and Hazardous Materials Agency identified 27 primary sites before 1980. USEPA Region 6 placed LHAAP on the NPL in August 1990.

The original 27 sites were combined into 22 sites that were placed into five groups. Primary site types identified included storage areas, landfills, open burning grounds, industrial areas, burial pits, underground storage tanks, sumps, and wastewater treatment plants. Group 1 consists of four sites (XX, 01, 11, and 27), Group 2 consists of eight sites (12, 16, 17, 18, 24, 49, 29, and 32), Group 3 consists of two sites (13 and 14), Group 4 consists of eleven sites (4, 8, 35A, 35B, 35C, 46, 47, 48, 50, 60, and 67), and Group 5 consists of two sites (52 and 63). Site 12, Site 16, and Site 18/24 have had accelerated remedial activities that include landfill capping and remedial treatment of groundwater and soils.

Environmental investigations have been completed for the sites in Groups 1, 3, and 5. No further action is required for these sites with the exception of ongoing Military Munitions Response Program investigations at Sites 27 and 54.

RI/feasibility study (FS) activities are ongoing for the Group 2 and Group 4 sites. The principal chemicals of concern (COCs) initially identified at LHAAP are perchlorate, volatile organic compounds (VOCs), and explosive compounds. Sample matrices included groundwater, surface water, sediments, and soils. **Table 2-1** summarizes the investigations performed to support the RI/FSs for Site 16 and the sites in Group 2 and Group 4. For details of these investigations, please refer to the specific RI and FS reports.

In addition to the RI/FS activities for the Group 2 and Group 4 sites, the USACE has been conducting investigations of surface water and sediment impacts in Harrison Bayou, Goose Prairie Creek, and Caddo Lake. Surface water and sediment samples have been collected from sampling stations since 1995 and most recently in September 2004.

2.2 Review of Other Studies

In addition to the LHAAP RI/FS and site investigations summarized above, other investigations have been and are being conducted by the USACE, other federal agencies, and universities. Information from these studies were acquired and examined for applicability to the installation-wide ERA. A formal request for information regarding recent studies conducted at LHAAP (i.e., biological, toxicity, plant/animal data, community surveys on flora and/or fauna, and data on chemical constituents for groundwater, surface water, soil, and/or sediment) was sent to universities, state and federal agencies, and local interest groups in November 2002. Information was reviewed and a determination was reached for potential inclusion in the installation-wide ERA. Information that was made available and was pertinent to the installation-wide ERA was considered for inclusion. All information relevant and appropriate for ecological risk was utilized in the Step 3 investigation. For example, pertinent soil data were used, but groundwater data were not, because groundwater is typically not evaluated in ERAs. Some of these studies are summarized below. A complete description of the data used for the Step 3 evaluation is provided in **Section 6.0**.

2.2.1 Background Studies

Background for soil and groundwater at LHAAP was previously determined in two reports by the USACE in 1995: *Soil Background Concentration Report* (USACE, 1995a) and *Groundwater Background Concentration Report* (USACE ,1995b).

In May 2001, the USACE conducted sediment sampling at five locations in Clinton Lake. Validated sample analyses available at the time of this writing include only metals and dioxins/furans.

The USACE conducted a background study for soil, groundwater, surface water and sediment in 2003 and 2004. This background study was conducted to support the installation-wide ERA, future decision-making, and the potential transfer of a portion of the LHAAP from the Army to the USFWS.

To address regulator concerns about the location and quality of background samples previously collected, Shaw conducted an additional background investigation for soil (Shaw, 2004a) and surface water/sediment (Shaw, 2004b) in 2004. These most recent reports provide the basis for the background comparisons that are used to refine the list of final COPECs at the end of the Step 3 evaluation (**Section 10.0**). Background surface/water sediment sample locations that were placed within the LHAAP fence line are depicted in **Figure 1-3** (additional locations outside the installation boundary are not shown; please see Shaw, 2004b). Background soil locations are depicted in **Figure 1-4**.

2.2.2 U.S. Fish and Wildlife Service Contaminants Investigations

The USFWS Region 2 conducted an investigation described in *Contaminants Investigation of the Western Portion of Caddo Lake Wildlife Refuge, Texas* (USFWS, 2002) to determine the suitability of transfer of administrative control of the western portion of the Caddo Lake National Wildlife Refuge (within LHAAP) from the Army to USFWS. Shallow soil samples were collected in 43 randomly selected locations primarily in the western portion of the installation. The USFWS analyzed the samples for metals, semivolatile organic compounds (SVOCs), organochlorine (OC) pesticides, total polychlorinated biphenyls (PCBs), dioxins/furans, and perchlorate.

In March 2002, the USFWS began an investigation in the southeastern portion of the installation for the same purpose as the 2002 investigation. The investigation was conducted in a manner consistent with the 2002 investigation.

An additional USFWS soil investigation was conducted in June, 2005. Thirty-two locations were sampled within the production area (USFWS, 2005). The data from this 2005 study were not available when the LHAAP BERA was conducted. However, the results from this study are discussed in Volume II (**Section 15.8.7.1**).

2.2.3 U.S. Geological Survey Sediment Sampling

In 2002 the U.S. Geological Survey Water Resources Division in Austin, Texas collected sediment samples from four boring locations near LHAAP. Two sediment borings were from Caddo Lake in the vicinity of LHAAP (the first near Goose Prairie Creek outlet [the "Goose Prairie Creek site"] and the second near Harrison Bayou, Central Creek, and Saunders Branch outlets (the "Harrison Bayou site"]). A third sediment boring was from the center of Caddo Lake near oil and gas operations [the "Mid-Lake site"] and the fourth boring was a background boring from upper Caddo Lake in an up gradient location called Carter Lake [the "Carter Lake site"]. The purpose of this sampling investigation was to determine rates of sediment deposition over time, identify potential sources of contamination (particularly mercury), compare sediment concentrations of selected OC pesticides, PCBs, polynuclear aromatic hydrocarbons (PAHs), and trace elements with sediment-quality guidelines that relate sediment toxicity to aquatic biota, and estimate if conditions are improving or declining over time. Primary study conclusions (Wilson, 2003) were as follows:

- One or more of the dichlorodiphenylethylene (DDE) concentrations at all sites, including the background site (Carter Lake), exceeded a threshold effect concentration (TEC), but none exceeded a probable effect concentration. The TEC represents the concentration below which an adverse effect to benthic biota rarely occurs.

- LHAAP is a possible historical source of the few OC compounds detected at the Goose Prairie Creek and Harrison Bayou sites.

- PAH concentrations at all sites were below TECs, and the majority of PAH compounds appear to have originated from leaks or spills from oil and gas operations and/or cars, boats, and aircraft in the general Caddo Lake area.

- For the Goose Prairie Creek and Harrison Bayou sites, of the eight trace elements with available TECs and PECs, concentrations of chromium, copper, lead, mercury, nickel, and zinc were above their respective TECs, but all, except one lead concentration at the Goose Prairie Creek site (deposited in approximately 1961 [± 5 years]), were below their respective PECs.

- For the Mid-Lake and Carter Lake sites, of the eight trace elements with available TECs and PECs, concentrations of arsenic, chromium, copper, lead, mercury, nickel, and zinc were above their respective TECs, but all were below their respective PECs.

- Among the trace element concentrations at the four sites, lead and mercury were consistently high at the Goose Prairie Creek site. LHAAP, because of its proximity and history of industrial activities, is the suspected source. Statistically significant trends in trace element concentrations were mixed, but more were downward than upward (i.e., deposition rates were decreasing over time). If the decreasing trends at the Goose Prairie Creek site continue, lead and mercury concentrations should be comparable to concentrations at the other three sites in a few years (for lead), and in 10 to 15 years (for mercury).

- At the Goose Prairie Creek site, of the eight trace elements with available TECs and PECs, concentrations of chromium, lead, and mercury showed significant downward trends since approximately 1961 (i.e., deposition rates are decreasing over time) and concentrations of nickel and zinc showed significant upward trends after 1980 (i.e., deposition rates are increasing over time). PCB Aroclors 1242 and 1254 showed significant downward trends (i.e., deposition rates are decreasing over time). (Dates are accurate to within ± 5 years).

- At the Harrison Bayou site, of the eight trace elements with available TECs and PECs, concentrations of chromium, copper, and lead showed significant downward trends (i.e., deposition rates are decreasing over time) and concentrations of mercury showed a significant upward trend (i.e., the deposition rate is increasing over time). DDE showed a significant downward trend (the deposition rate is decreasing over time).

- At the Mid-Lake site, of the eight trace elements with available TECs and PECs, concentrations of arsenic and mercury showed a significant upward trend (i.e., deposition rates are increasing over time). DDE showed a significant downward trend (the deposition rate is decreasing over time).

- At the Carter Lake site, of the eight trace elements with available TECs and PECs, concentrations of arsenic, cadmium, chromium, lead, mercury, nickel, and zinc showed a significant downward trend (i.e., deposition rates are decreasing over time).

Concentrations of arsenic, cadmium, and zinc were greatest at this site compared to the other three sites.

- Computations to indicate the dominant source of mercury (atmospheric fallout vs. drainage area) suggest that about one-third of the mercury at the Goose Prairie Creek site might result from drainage area sources, with the remainder coming from atmospheric sources. No drainage area mercury source was identified at the Harrison Bayou site (it was mostly from atmospheric fallout). (Computations have an accuracy of about 20 percent).

2.2.4 USEPA Region 6 Fish Study

Fish tissue samples were collected from the Goose Prairie Creek Cove area in Caddo Lake, as well as from the Lake area near the Harrison Bayou drainage, from February through March, 2004 by USEPA, TCEQ, and USFWS (USEPA, 2004). Fish were also collected from a background reference location (Clinton Lake). A total of 213 fish were collected and analyzed. Every effort was made to collect fish at or near the points at which sediment samples were collected in previous studies. Species collected and processed for tissue chemical concentrations included redear sunfish, black crappie, warmouth, bluegill, large mouth bass, brown bullhead, and channel catfish. Whole-body bullhead samples were procured, while fillet samples were obtained for analysis from the other species. Samples were analyzed for metals, SVOCs, VOCs, pesticides, PCBs, dioxin/furans, perchlorate, and percent lipids, and results were validated by an independent laboratory. The sampling focused on those constituents determined to potentially pose the most significant threat to human health and the environment. All fish collected were healthy and few significant abnormalities were found. Detected constituents included metals and dioxins, with infrequent and low-level detections of SVOCs. One VOC (2-butanone) was detected in a fish sample from Clinton Lake. Pesticides, PCBs, and perchlorate were not detected in fish tissue samples.

2.2.5 Other Available Data

In late 2002, the USACE requested information that could be relevant to the installation-wide ERA at LHAAP. This request was made of the following universities: East Texas Baptist, Stephen F. Austin, and Texas Tech. The request also included USFWS, Texas Parks and Wildlife Department, Caddo Lake State Park, CLI, Caddo Lake Ramsar Clearinghouse Scientific and Technical Review Panel, Caddo Lake Wildlife Management Area, and Complete Environmental Services. Applicable and useable information generated through these studies was used to complete the installation-wide ERA when available.

2.3 Review of Steps 1 and 2 for LHAAP

Screening ERAs for ecological resources at LHAAP were completed in 2001-2003. The screening ERAs for LHAAP, which constitute Steps 1 and 2 of USEPA's eight-step ERA process, are presented in *Final Ecological Risk Assessment, A Supplement to the Remedial Investigation Report Site 16 Landfill, Longhorn Army Ammunition Plant, Karnack, Texas* (Jacobs, 2001a), *Final Baseline Human Health and Screening Ecological Risk Assessment Report for the Group 2 Sites, Longhorn Army Ammunition Plant, Karnack, Texas* (Jacobs, 2002a), and the *Final Baseline Human Health and Screening Ecological Risk Assessment Report for the Group 4 Sites, Longhorn Army Ammunition Plant, Karnack, Texas* (Jacobs, 2003a).

2.3.1 Technical Approach

The screening ERA for all sites consisted of problem formulation and data analysis, characterization of potential ecological receptors and estimates of exposure, characterization of ecological toxicity, and risk characterization. Screening level ecological risks were characterized for each site by identifying those constituents that were either detected at concentrations exceeding benchmark screening levels or had estimated daily intakes greater than available TRVs.

Screening level ecological risks were characterized for each site by identifying those contaminants that:

- Were detected at concentrations exceeding the benchmark screening levels
- Had no available benchmark for screening
- Were not detected but had a minimum detection limit exceeding an associated benchmark
- Were detected and are on the TCEQ list of bioaccumulative constituents of concern
- Had a hazard quotient (HQ) greater than 1.0 for one or more indicator species in the food chain model evaluation
- Had an HQ greater than 1 for one or more aquatic indicator species in the indirect sediment exposure pathway evaluation

In the problem formulation step, the data for each site were reviewed and COPECs were identified. Maximum detected concentrations (MDCs) of contaminants in soil, surface water, and sediments were compared to appropriate ecological benchmarks (TNRCC, 2000). For soil, TCEQ ecological soil screening benchmarks (TNRCC, 2000) for soil invertebrates (earthworms) and plants were used. For water, TCEQ ecological benchmarks (TNRCC, 2000) for freshwater systems were selected. Screening levels for sediment samples were selected based on TCEQ ecological benchmarks (TRNCC, 2000) for freshwater sediment. Background comparisons were not used to eliminate constituents as COPECs.

The exposure assessment consisted of the characterization of potential ecological receptors and the development of estimates of exposure. LHAAP contains a wide diversity of vegetation and habitats and is characterized by both terrestrial and aquatic habitats. The terrestrial indicator species selected for the screening ERA included the Northern Bobwhite (avian herbivore) (Groups 2 and 4 only), American Woodcock (avian carnivore), Short-Tailed Shrew (mammalian omnivore), White-Footed Mouse (mammalian omnivore), Red-Tailed Hawk (avian carnivore), and Chipping Sparrow (avian herbivore) (Site 16 only). The aquatic indicator species selected for the screening ERA included the Belted Kingfisher (avian piscivore), Osprey (avian carnivore), Alligator Snapping Turtle (reptilian carnivore), and River Otter (mammalian carnivore).

Exposures to the terrestrial and aquatic indicator species were evaluated through the use of a food chain model that considered the intake of COPECs from soil, sediment, water, and food. Food chain models were completed using conservative input assumptions including the use of the MDC, assuming 100 percent area use and contaminant bioavailability and evaluating only sensitive life stages. Concentrations of the COPECs in various food items were determined from dietary uptake factors in the form of conservative bioconcentration factors (BCFs) and bioaccumulation factors (BAFs).

2.3.2 Results

Results of the Step 1 and 2 screening are presented below. **Section 2.3.2.1** presents the results for Site 16. The results for Groups 2 and 4 are presented in **Sections 2.3.2.2** and **2.3.2.3**, respectively.

2.3.2.1 Site 16 Results

As shown on **Table 2-2**, the hazard indices (HIs) for all evaluated terrestrial indicator species exceeded 1 at Site 16. However, the Red-Tailed Hawk, a wide-ranging species representing trophic level 4, had results only slightly above 1 (1.5). The Short-Tailed Shrew had the highest HI (821), suggesting further evaluation is required. The contaminants associated with the highest HIs for the terrestrial species included aluminum, arsenic, chromium, lead, mercury, selenium, thallium, and zinc. In addition, the HIs for three of the four aquatic indicator species exceeded 1 at Site 16. All results for aquatic receptors were at or below 25. The contaminants associated with the highest HIs for the aquatic species included arsenic, barium, chromium, thallium, and zinc. HIs for the Chipping Sparrow and Alligator Snapping Turtle were not calculated for Site 16 due to a lack of toxicity data. The results did not consider that the HIs for some constituents may be greater than 1 as a result of natural (background) conditions.

2.3.2.2 Group 2 Results

As shown in **Table 2-2**, the HIs for all terrestrial indicator species exceeded 1 at Sites 12, 17, 18/24, 29, 32, and 49, with the largest HI values at Site 49. The contaminants associated with the highest HIs for the terrestrial species included aluminum, arsenic, barium, cadmium, chromium, lead, mercury, selenium, thallium, and zinc. All of the HIs for the terrestrial indicator species for Harrison Bayou were below 1; the HIs for all aquatic indicator species exceeded 1 at Sites 12, 17, 18/24, 29, 32, Harrison Bayou, and Caddo Lake. The largest HIs generated through the food chain model are generally associated with Site 17 and Harrison Bayou. The constituents associated with the highest HIs for the aquatic species included aluminum, arsenic, barium, chromium, lead, thallium, vanadium, zinc, and trichloroethene. The results did not consider that the HIs for some constituents may be greater than 1 as a result of natural (background) conditions.

2.3.2.3 Group 4 Results

As shown in **Table 2-2**, the HIs for one or more terrestrial indicator species exceeded 1 at all sites with the largest HI values at Sites 46 and 47. The contaminants associated with the highest HIs for the terrestrial species include aluminum, arsenic, barium, cadmium, chromium, lead, mercury, selenium, thallium, vanadium, and zinc. All of the HIs for the terrestrial indicator species for the water bodies were below 1; the HIs for one or more aquatic indicator species exceeded 1 at Sites 35A, 46, 50, Goose Prairie Creek, Central Creek, Saunders Branch, and Caddo Lake. The largest HIs for aquatic indicator species generated through the food chain model were generally associated with Site 46. The contaminants associated with the highest HIs for the aquatic species included aluminum, arsenic, chromium, copper, lead, selenium, vanadium, and zinc. The results did not consider that the HIs for some contaminants may be greater than 1 as a result of natural (background) conditions.

2.4 Summary

The screening ERAs for Site 16, Group 2, and Group 4 Sites consisted of problem formulation, data analysis, identification of potential ecological receptors, estimates of exposure, characterization of ecological toxicity, and risk characterization.

Based on the screening evaluations a list of terrestrial and aquatic COPECs for the installation were developed utilizing the following criteria:

- Constituent detected at concentrations exceeding benchmark screening level
- Constituent detected with no available benchmark screening level
- Constituent not detected but the minimum detection limit exceeded the benchmark screening level
- Constituent was detected and is on the TCEQ list of bioaccumulative constituents

The terrestrial and aquatic COPECs from the screening ERAs are presented in **Table 2-3**.

Table 2-1
Summary of Environmental Investigations

Table 2-2
Summary of Hazard Indices for Indicator Species from Previous Ecological Risk Assessments

Table 2-3
Summary of COPECs from Screening Ecological Risk Assessments

Table 2-1
Summary of Environmental Investigations

Agency/Contractor	Date	Investigation Summary
Jacobs (Group 2 Phase I RI)	1993	Groundwater monitoring wells installed Sites 12, 16, and 17. Groundwater samples collected at Sites 12, 16, 17, 29, and 32. Soil samples collected at Sites 12, 16, 17, 29, and 32. Sediment samples collected at Site 16. Surface water and sediment samples collected at Sites 12, 17, 18/24, 29, and 32. Line samples collected at Sites 29 and 32.
USACE	1993	Inventory of 125 waste process and 20 waste racks at LHAAP.
USACE (Group 4 Phase I RI)	1993	Collected Background samples. Collected liquid and sludge samples from LHAAP sumps. Collected soil samples from LHAAP sumps.
USACE (Group 4 Phase II RI)	1994	Groundwater monitoring wells installed at Sites 35A, 35B, 35C, 46, 47, and 48. Soil samples collected at Sites 351, 35b, 35c, 46, 47, and 48. Surface water and sediment samples collected along Goose Prairie Creek.
USACE	1995	Began quarterly sampling of Site 16 seep.
Jacobs (Phase II)	1995	Groundwater monitoring wells installed and sampled at Sites 12, 16, 17, 18/24, 29, and 32. Soil samples collected for geotechnical analyses at Sites 16, 18/24, 29, 50, and 60. Surface water and sediment collected at Sites 12, 16, 17, 18/24, 29, 32, and 50. Waste line and associated soil samples collected at Sites 29 and 32.
Jacobs	1996	Groundwater treatability study (extraction wells installed) conducted at Site 16.
Jacobs (Phase III)	1997	Groundwater monitoring wells, extraction wells, piezometers installed at Site 16. Soil, surface water, and sediment samples collected at Site 16. Surface resistivity conducted at Site 16.
Jacobs (Group 4 Phase III RI)	1998	Groundwater monitoring wells installed and sampled at Sites 12, 17, 29, 32, 35A, 35B, 35C, 46, and 47. Groundwater sampled at Sites 16, 18/24, 35A, 35B, 35C, 47, and 48. Geoprobe soil gas samples collected at Site 16. Surface water and sediment samples collected at Sites 12, 17, 18/24, 29, 32, 35A, 46, Goose Prairie and Central Creeks, Harrison Bayou, and Saunder's Branch. Soil samples collected at Sites 17, 29, 32, 35A, 35B, 46, 47, and 48. Soil samples collected at LHAAP waste process sump locations. Collected geoprobe shallow groundwater samples in Goose Prairie Creek, and sediment and surface water samples in Goose Prairie Creek and wetlands.
USACE	1998	Site characterization and analysis penetrometer system probe holes placed in Site 16 landfill.
USACE/STEP	2000, 2001	Perchlorate analysis (groundwater and soil sampling) conducted at Site 16. Additional groundwater sampling conducted at Sites 35A, 35B, 35C, 46, 47, and 48 in 1996. Additional groundwater sampling for perchlorate analysis in 2000 and 2001 at Sites 35A, 35C, 46, and 50. Additional sediment samples collected in Goose Prairie Creek cove. Additional sediment samples collected in Caddo Lake. Quarterly surface water samples collected in Goose Prairie Creek.
USFWS	2002-2005	Random soil sampling program across the western, far northwestern, northern/central/eastern, and Production Area of Longhorn.
Shaw	2004	Soil, surface water, and sediment background sampling conducted at on- and off-site locations.
Shaw	2004	Soil and small mammal tissue collection for development of site-specific soil-to-small mammal uptake factors.
Shaw	2004	Additional on-site surface water and sediment samples collected from Goose Prairie Creek, Central Creek, and Saunders Branch to address potential data gaps in these watersheds.
Shaw	2004-2006	Various sampling programs implemented to address characterization of contamination in soil near various environmental sites (e.g., the Pistol Range) and as part of a study evaluating contamination around sumps located throughout the Installation.
Shaw	2006	BERA field sample collection, including soil and plant tissue samples from the Industrial and Waste Sub-Area, and sediment samples from Goose Prairie Creek and the Goose Prairie Creek Cove of Caddo Lake.

Notes:

LHAAP – Longhorn Army Ammunition Plant
RI – remedial investigation
STEP - Solutions to Environmental Problems
USACE - U.S. Army Corps of Engineers
USFWS - U.S. Fish and Wildlife Service

Table 2-2
Summary of Hazard Indices for Indicator Species from Previous Ecological Risk Assessments

Sites	Hazard Indices									
	Terrestrial Indicator Species						Aquatic Indicator Species			
	American Woodcock	Short-Tailed Shrew	White-Footed Mouse	Red-Tailed Hawk	Northern Bobwhite	Chipping Sparrow	Belted Kingfisher	Osprey	River Otter	Alligator Snapping Turtle
Site 16	165	821	42	1.5	--[a]	NA[b]	9.6	1.2	25	NA[b]
Group 2 Sites:										
Site 12	20 (24)[c]	19 (19)[c]	3 (3)[c]	0.4 (0.5)[c]	9 (11)[c]	--	12	1.4	16	5.2
Site 17	378	577	34	3.2	92	--	124	15	1,200	59
Site 18/24	512	59	14	3.7	120	--	142 (143)[d]	17 (17)[d]	170 (170)[d]	31 (32)[d]
Site 29	383	582	35	3.2	91	--	54	6.5	41	15
Site 32	495	695	37	3	130	--	56	6.7	20	9.2
Site 49	2,885	919	91	112	2,238	--	--	--	--	--
Harrison Bayou	0.01	0.8	0.8	0.01	0.02	--	12	1.4	5,600	240
Caddo Lake	--	--	--	--	--	--	11	1.4	13	14
Group 4 Sites:										
Site 4	121	639	31	1	35	--	--	--	--	--
Site 8	370	650	34	0.9	113	--	--	--	--	--
Site 35A	1,269	893	63	1.5	831	--	13	1.6	160	17
Site 35B	154	674	33	1.1	35	--	--	--	--	--
Site 35C	171	852	41	0.96	38	--	--	--	--	--
Site 46	443	1,481	94	2.7	142	--	538	65	370	62
Site 47	635	1,553	86	2.6	249	--	--	--	--	--
Site 48	242	742	43	1.9	72	--	--	--	--	--
Site 50	52	405	21	0.9	24	--	79	9.5	230	19
Site 60	61	206	10	0.7	46	--	--	--	--	--
Site 67	61	568	28	1.1	34	--	--	--	--	--
Goose Prairie Creek	0.07	0.5	0.6	0.04	0.1	--	98	12	380	26
Central Creek	0.01	0.2	0.2	0.002	0.01	--	11	1.3	13	5.2
Saunder's Branch	0.004	0.1	0.1	0.002	0.01	--	8	1.0	14	3.5
Caddo Lake	--	--	--	--	--	--	57	6.9	42	26

Notes:

[a] Dashes indicate that the associated receptor was not relevant for the associated site.

[b] A hazard index was not calculated due to the lack of toxicity data.

[c] Value in parentheses incorporates soil data collected below the existing landfill cap.

[d] Value in parentheses incorporates sediment data from interception trench.

LHAAP Longhorn Army Ammunition Plant

Table 2-3
Summary of COPECs from Previous Screening Ecological Risk Assessments

COPEC	Terrestrial	Aquatic
Aluminum	X[c]	X[sw]
Antimony	X[d]	X[w]
Arsenic	X[c]	X[tw]
Barium	X[g]	X[tu]
Beryllium	X[e]	X[sw]
Cadmium[ab]	X[abd]	X[abv]
Calcium	X[f]	X[vw]
Chloride	X[h]	
Chromium[ab]	X[abc]	X[aw]
Cobalt	X[e]	X[w]
Copper[ab]	X[abi]	X[absw]
Cyanide	X[c]	X[w]
Iron	X[d]	X[w]
Lead[ab]	X[abf]	X[asu]
Magnesium	X[f]	X[vw]
Manganese	X[d]	X[uw]
Mercury[ab]	X[abf]	X[abs]
Nickel[ab]	X[abf]	X[abw]
Nitrate	X[h]	
Perchlorate	X[c]	X[u]
Potassium	X[j]	X[w]
Selenium[ab]	X[abd]	X[abw]
Silver	X[c]	X[su]
Sodium	X[g]	X[vw]
Strontium	X[d]	X[w]
Sulfate	X[g]	X[v]
Thallium[ab]	X[g]	X[absu]
Vanadium	X[c]	X[w]
Zinc[ab]	X[abd]	X[absw]
2,4-Dinitrotoluene	X[g]	
2,6-Dinitrotoluene	X[g]	X[w]
2-Amino-4,6-Dinitrotoluene	X[kl]	
4-Amino-2,6-Dinitrotoluene	X[g]	X[w]
m-Dinitrobenzene	X[h]	
HMX	X[d]	
Nitrobenzene	X[*]	
1,3,5-Trinitrobenzene	X[g]	
sym-Trinitrobenzene	X[g]	
2,4,6-Trinitrotoluene	X[g]	
Aldrin[ab]	X[bp]	
Aroclor 1016[ab]	X[b*]	
Aroclor 1221[ab]	X[b*]	
Aroclor 1232[ab]	X[b*]	
Aroclor 1242[ab]	X[b*]	
Aroclor 1248[ab]	X[b*]	

COPEC	Terrestrial	Aquatic
Acetone	X[c]	X[sw]
Benzene	X[c]	
Bromodichloromethane		X[w]
2-Butanone	X[c]	X[su]
Carbon Disulfide	X[c]	X[sw]
Chloroform	X[d]	
1,1-Dichloroethane	X[g]	
1,2-Dichloroethane	X[*]	X[u]
1,1-Dichloroethene	X[c]	X[u]
1,2-Dichloroethene	X[c]	
cis-1,2-Dichloroethene	X[m]	X[u]
Dichlorodifluoromethane	X[d]	
trans-1,3-Dichloropropene	X[e]	
Ethylbenzene	X[e]	X[s]
2-Hexanone	X[g]	
p-Isopropyltoluene		X[w]
Methylene chloride	X[d]	
Styrene	X[e]	
Tetrachloroethene	X[e]	
Toluene	X[l]	X[tw]
1,1,1-Trichloroethane	X[c]	
Trichloroethene	X[c]	X[u]
Trichlorofluoromethane	X[g]	X[s]
Vinyl chloride	X[e]	X[w]
Xylenes	X[d]	
Acrolein		X[*]
Benzoic acid	X[j]	
bis(2-Ethylhexyl)phthalate	X[i]	X[w]
Butylbenzyl phthalate	X[j]	
p-Cymene	X[n]	
Di-n-butyl phthalate	X[k]	X[w]
Di-n-octyl phthalate	X[d]	
Dioxins[ab]	X[bgo]	X[bsw]
Furans[ab]	X[bgo]	X[bsw]
Hexachlorobenzene[ab]	X[bg]	
1-Methylethyl benzene	X[n]	
3-Methylphenol		X[s]
4-Methylphenol	X[d]	X[s]
Phenol		X[s]
Acenaphthylene	X[d]	X[s]
Anthracene	X[c]	X[s]
Benzo(a)anthracene	X[c]	X[s]
Benzo(a)pyrene	X[c]	X[s]
Benzo(b)fluoranthene	X[d]	X[s]
Benzo(k)fluoranthene	X[c]	X[s]

Table 2-3
Summary of COPECs from Previous Screening Ecological Risk Assessments

COPEC	Terrestrial	Aquatic
Aroclor 1254[ab]	X[bi]	
Aroclor 1260[ab]	X[b*]	
alpha-BHC[ab]	X[bd]	
Chlordane[ab]	X[b*]	
alpha-Chlordane[ab]	X[bq]	
gamma-Chlordane[ab]	X[bq]	
trans-Chlordane[ab]	X[b*]	
4,4'-DDD[ab]	X[bp]	
4,4'-DDE[ab]	X[bc]	
4,4'-DDT[ab]	X[bc]	
Dieldrin[ab]	X[br]	
Endosulfan sulfate	X[r]	
Endrin[ab]	X[b*]	
Heptachlor[ab]	X[bc]	
Heptachlor epoxide[ab]	X[bd]	
Lindane[ab]	X[bd]	
Silvex	X[r]	

COPEC	Terrestrial	Aquatic
Benzo(g,h,i)perylene	X[i]	X[s]
Chrysene	X[i]	X[s]
Dibenzo(a,h)anthracene	X[d]	X[s]
Dibenzofuran	X[c]	X[s]
Fluoranthene	X[i]	X[s]
Fluorene		X[s]
Indeno(1,2,3-cd)pyrene	X[i]	
2-Methylnaphthalene	X[e]	
Naphthalene	X[e]	X[w]
Phenanthrene	X[c]	X[s]
Pyrene	X[c]	

Notes:

* minimum detection limit exceeds screening benchmark
[a] Bioaccumulation per TNRCC 2000
[b] Bioaccumulation per TNRCC 2001
[c] Maximum detected concentration at Site 47
[d] Maximum detected concentration at Site 46
[e] Maximum detected concentration at Site 48
[f] Maximum detected concentration at Site 49
[g] Maximum detected concentration at Site 17
[h] Maximum detected concentration at Site 32
[i] Maximum detected concentration at Site 35A
[j] Maximum detected concentration at Site 50
[k] Maximum detected concentration at Site 16
[l] Maximum detected concentration at Site 29
[m] Maximum detected concentration at Site18
[n] Maximum detected concentration at Site 12
[o] Maximum detected concentration at Site 35C
[p] Maximum detected concentration at Site 35B
[q] Maximum detected concentration at Site 04
[r] Maximum detected concentration at Site 60
[s] Maximum detected concentration at Caddo Lake
[t] Maximum detected concentration at Saunders Branch
[u] Maximum detected concentration at Harrison Bayou
[v] Maximum detected concentration at Central Creek
[w] Maximum detected concentration at Goose Prairie Creek

Aquatic — surface water and/or sediment
BHC — benzene hexachloride
COPEC — contaminant of potential ecological concern
DDD — dichlorodiphenyldichloroethane
DDE — dichlorodiphenyldichloroethylene
DDT — dichlorodiphenyltrichloroethane
HMX — high melting explosive
LHAAP — Longhorn Army Ammunition Plant
Terrestrial — soil

3.0 Problem Formulation – Step 3 Introduction

The remainder of this volume provides the approach, findings, and conclusions of Step 3 of the USEPA eight-step ERA process at LHAAP. The refined list of COPECs that is created at the end of Step 3 are further characterized and evaluated in the BERA (Volume II). The purpose of the Step 3 Problem Formulation is to provide information to support a risk management decision at the Step 3 SMDP regarding the need for additional evaluation of ecological risk for LHAAP. Problem formulation establishes the assessment endpoints or specific ecological values to be protected. A conceptual model of the installation was developed that includes the assessment and measurement endpoints and the relationship between exposure and effects.

Step 3 initiates the problem formulation phase of the installation-wide ERA. In the Step 1 and 2 screening-level assessment, conservative assumptions were used. Step 3 refines the screening-level problem formulation and, with input from stakeholders and other involved parties, more precisely defines the ecological entities that are of concern at LHAAP. In order to provide a mechanism for stakeholder input, the Army conducted meetings and workshops with the regulatory agencies on July 18 and 19, 2002, and November 6, 2002, and November 3, 2003 to discuss the scope of Step 3 for LHAAP.

In Step 3, the results of the screening assessment and additional site-specific information are used to determine whether additional investigation is necessary, and if so, the scope and goals of the installation-wide ERA. Important inputs to this decision are:

- Reviewing and refining information on contaminant fate and transport, complete exposure pathways and ecosystems potentially at risk
- Selecting assessment endpoints
- Refining preliminary COPECs
- Further characterizing ecological effects of contaminants using realistic and site-specific food chain models
- Developing a conceptual model with working hypotheses or questions, if any, that additional steps in the risk assessment process would address (typically completed in Step 4)

At the conclusion of Step 3, there is a SMDP, which consists of agreement on five items: the final list of refined COPECs, the assessment endpoints, the exposure pathways, the risk questions, and the conceptual model integrating these components.

Step 3 is presented in **Sections 4.0** through **11.0**, as follows:

- **Section 4.0: Exposure Pathways and Ecosystems at Risk**. Describes the ecological setting, the ecological receptors likely to be present at LHAAP (including threatened or endangered species), describes the measurement receptors selected to represent the food web at LHAAP, and presents a conceptual site model (CSM) for the LHAAP food web.

- **Section 5.0: Ecological Endpoints Identification**. Identifies the assessment and measurement endpoints at LHAAP.

- **Section 6.0: Identification of Constituents of Ecological Concern**. Describes the methodology used for the initial COPEC screen and presents the results for each medium.

- **Section 7.0: Risk Characterization and Risk Estimation**. Introduces the process by which ecological risk was characterized for the measurement receptors, including an evaluation of direct toxicity to the receptors and the use of a refined food chain model.

- **Section 8.0: Uncertainty Analysis**. Describes the uncertainties inherent in the Step 3 evaluation and their potential effects on the results of the analyses.

- **Section 9.0: Refined Exposure Pathways and Receptors**. Presents any modifications of the CSM that are appropriate based on the risk characterization results.

- **Section 10.0: Refined List of COPECs**. Presents a detailed evaluation of all COPECs based on multiple lines of evidence and provides a recommendation as to which final COPECs require further evaluation in the installation-wide BERA, or addressed in some other manner, such as focused remediation.

- **Section 11.0: 3 Revised Conceptual Model, Risk Questions, and Scientific Management/Decision Point**. Summarizes the findings of Step 3 and lists the final COPECs recommended for the installation-wide BERA, discusses the revised conceptual model, presents risk questions to be addressed in the BERA, and presents the SMDP reached at the end of Step 3.

4.0 Exposure Pathways and Ecosystems at Risk

This section presents the environmental setting, the identification and selection of ecological receptors of concern and measurement endpoints, and the identification of complete exposure pathways for the installation.

4.1 Environmental Setting (Characterization of Habitats)

LHAAP has a variety of ecological habitats that support a wide variety of floral and faunal species. The terrestrial and aquatic ecological habitats distributed throughout LHAAP are summarized below. Additionally, the numbers and different types of biota observed and recognized on LHAAP are presented. This information is used primarily to identify ecological entities (i.e., assessment endpoints) to be protected at the site.

The vegetation at LHAAP has been classified by the National Biological Service and Southern Science Center (Lafayette, Louisiana) using Thematic Mapper data from January 30, 1993. Vegetation types were ground-truthed by members of the CLI during 1994 and 1995 at over 100 locations. In addition, as part of the preparation of this Step 3 Report, a site reconnaissance was conducted October 22 through October 25, 2002, for the purpose of developing an updated habitat map for LHAAP. Based on this work, the 8,493-acre LHAAP site has been classified into eight vegetation types, including two types of wetlands (bottomland hardwood and cypress swamp), that are depicted in **Figure 4-1** (Habitat Map) and listed in **Table 4-1**.

LHAAP has a gradation of habitats, from grassland/forbland and shrubland/oldfield habitats around developed areas, to moist upland pine forest, mixed forest, temporarily flooded bottomland forest, cypress swamp, and shallow water aquatic habitats in Caddo Lake. The habitats that are mapped include grassland/forbland, shrubland/oldfield, developed areas, pine forest, mixed pine/hardwood forest, upland hardwood forest, wetland/bottomland forest, and cypress swamp. Pines are generally replaced by hardwoods as conditions transition from moist upland to wet bottomland.

4.1.1 Terrestrial Habitats

Grassland/Forbland. Habitats that are dominated by herbaceous species of plants and that have less than 10 percent woody canopy coverage are considered grassland/forbland. Common species include cool and warm season grasses, legumes, composites, and mints. These habitats require some type of disturbance to be maintained at LHAAP and surrounding areas. Disturbances that create or maintain grassland/forbland include clearing and grading for construction or demolition, tillage for agriculture, mowing, herbicide application, and prescribed burning. Without disturbance, grassland/forbland areas will undergo succession and quickly become oldfield, then shrubland, and then forest. Grassland/forbland within the installation is found along road shoulders and ditches, firebreaks, landfill caps, and within developed areas. The majority of the grassland/forbland areas at LHAAP are less than 5 acres in size. No high quality grassland/forbland areas have been identified at LHAAP. Grassland/forbland outside of the installation also includes agricultural hayland/pasture used mostly for feeding cattle.

Shrubland/Old Field. Habitats that are undergoing succession from grassland/forbland to oldfield to shrubland to forest have characteristics of both grassland/forbland and forest. Woody canopy coverage is from 10 to 50 percent for oldfield and from 50 to 100 percent for shrubland. Woody species are generally less than 20 feet tall and have stem/trunk diameters less than four inch diameter breast height (dbh). Thorny species such as blackberry and greenbriar are often present. Like grassland/forbland, these areas require some type of periodic disturbance to be maintained in upland areas. Some shrub/scrub communities are maintained naturally by flooding regimes in bottomland areas.

Developed Areas. Developed areas are habitats that have been significantly modified by human activities. These areas include buildings, production areas, bunkers, concrete pads, asphalt roads and parking lots, gravel roads and parking lots, utility lines, railroad lines, and remediation areas such as lagoons and landfills. These areas have a high percentage of impervious surfaces, soil profiles that have been physically disturbed, and soils that have been impacted by contaminants. Most of the developed areas are located in upland areas. Other habitat types, particularly grassland/forbland and shrubland/oldfield, are included within developed areas.

Pine Forest. Pine trees dominate these habitats with canopy coverage greater than 50 percent by trees that are 4 or more inches dbh, and 20 feet or more in height. Loblolly is the most common pine at LHAAP. Loblolly has been planted in plantations and also regenerates naturally at LHAAP. Monotypical even-aged stands of pine are generally poor habitats for most species of animals. Shortleaf, longleaf, and slash pine are also present. Pine forests usually contain an understory of hardwood saplings/shrubs such as sweet gum and dogwood. Pine forests occur in the upland areas. Most of the stands of pine forest at LHAAP are less than 50 years old and occur at locations that were used for hayland, pasture, and/or row crops before the Army acquired the land in the 1940s. A few small stands of large or old growth pines exist around the cemetery and as isolated trees.

Mixed Pine/Hardwood Forest. These habitats are dominated by a mixture of pine (coniferous) and deciduous (hardwood) trees, with canopy coverage greater than 50 percent by trees that are 4 or more inches dbh, and 20 feet or more in height. The majority of the mixed forest areas occur in the upland areas but some bottomland areas contain mixed forest. Most stands of mixed forest at LHAAP are less than 50 years old and occur at locations that were used for hayland, pasture, and/or row crops before the Army acquired the land in the 1940s.

Upland Hardwood Forest. Deciduous (hardwood) trees dominate these habitats, with canopy coverage greater than 50 percent by trees that are 4 or more inches dbh, and 20 feet or more in height. Oaks and sweet gum are the most common species. A few pines also occur in these areas.

Bottomland Hardwood Forest. These habitats are dominated by deciduous (hardwood) trees, with canopy coverage greater than 50 percent by trees that are 4 or more inches dbh, and 20 feet or more in height. Some loblolly pine and cypress occur in most of these areas. This forest type occurs along Harrison Bayou and other bottomland areas along stream courses. The majority of the bottomland areas at LHAAP (particularly Harrison Bayou) has not been logged or cleared for agricultural or military use. Approximately half of Harrison Bayou is considered "virgin" forest. Trees are generally large and contain a diversity of oaks. These forest areas have hydric soils and are considered wetlands by the Cowardin System used by the USFWS, and also are considered wetlands in accordance with the *Wetlands Determination Manual* (USACE, 1985). The USACE manual is used to determine if wetlands are considered "jurisdictional." Some wetlands at LHAAP are jurisdictional wetlands.

Cypress Swamp. Bald cypress trees dominate this habitat with canopy coverage greater than 50 percent by trees that are 4 or more inches dbh, and 20 feet or more in height. These areas have seasonal to permanent flooding. The soil is saturated except in times of drought, and standing water from one to six feet deep is common. Cypress swamps occur adjacent to and within Caddo Lake, ponds, along stream channels and oxbows, and other areas that experience frequent long-term flooding or standing water. These areas are also considered wetlands.

4.1.2 Aquatic Habitats

Surface water from LHAAP drains into Caddo Lake through four natural drainage systems that cross portions of the installation. These include Harrison Bayou, Goose Prairie Creek, Central Creek, and Saunders Branch. The headwaters of Goose Prairie Creek are located near the northwestern corner of LHAAP. The creek flows along the northern edge of the facility and drains approximately 30 percent of LHAAP. Harrison Bayou enters LHAAP on the southern edge of the installation. The bayou carries 30 percent of the surface drainage of LHAAP and bisects the installation in a northeasterly direction (Sverdrup Environmental, 1996). Harrison Bayou is important to the Caddo Lake watershed, both historically and ecologically. This area provides one of the last remaining old-growth bottomland hardwood forests in the southeastern United States and contains virgin stands of hardwoods that date back to the 1830s (CLI, 1995). Central Creek enters LHAAP on its western edge just south of the town of Karnack. Approximately 29 percent of the surface drainage from LHAAP is carried to Caddo Lake through this drainage way. Saunders Branch flows onto LHAAP near the southeastern corner of the facility and flows northward into Caddo Lake, draining approximately 11 percent of LHAAP.

The four watersheds were delineated based on drainage patterns of the four main streams that flow through LHAAP to Caddo Lake and on similar wetland habitat types. To obtain the areas of the watersheds, habitat maps and aerial photographs were examined to identify habitat types adjacent to the streams that are likely to be inundated with water for a significant portion of the year (e.g., wetland/bottomland forest). The areas of these habitats were then summed. The watershed areas were limited only to areas that were on site. Portions of the installation where background surface water samples were collected (Shaw, 2004b) were not included because these areas do not accurately reflect the area captured by the locations of the samples used and would artificially increase the area of the watershed and decrease the AUFs involved in the food chain equations. The watershed areas are presented in **Figure 4-2**, and were estimated as follows:

- Harrison Bayou (475-acre watershed)
- Goose Prairie Creek (246-acre watershed)
- Central Creek (262-acre watershed)
- Saunders Branch (150-acre watershed)

Harrison Bayou is considered a high quality natural area by the TCEQ and a wetland area of international importance by the International Ramsar Treaty. This bottomland area experiences flooding and water-logged soils that have prevented access by logging equipment and was not considered appropriate for production areas. Harrison Bayou contains several species of oaks and other trees that are generally large in size. Approximately one-half of Harrison Bayou is considered virgin forest. Photographs, maps, hydric soils information, and field observations indicate that the great majority of Harrison Bayou is jurisdictional wetland. The value of Harrison Bayou is enhanced by its connection with Caddo Lake, the high percentage of upland areas around the bayou being forested, and other large sections of forested bottomlands being in Caddo Lake State Park and the state Wildlife Management Area to the northwest. Harrison Bayou provides valuable habitat for endangered species, neo-tropical migrant birds, migratory waterfowl, and resident species of wildlife. Harrison Bayou also provides typical wetland functions such as flood-flow attenuation, food-chain support, sediment retention, and water quality improvement.

Caddo Lake is a eutrophic water body located on the east side of LHAAP. The surface area of the lake covers approximately 51 square miles and has a mean depth of 6 feet. The watershed of the lake encompasses approximately 2,700 square miles. The lake is divided by the Texas-Louisiana state line and lies within the boundaries of Marion and Harrison Counties, Texas, and Caddo Parish, Louisiana. Caddo Lake was designated as an International Ramsar Site in October 1993, recognizing it as one of Texas' most important and unique inland freshwater wetlands. Caddo Lake provides significant regionally critical habitat for a variety of migratory and resident wildlife species including waterfowl, raptors, colonial waterbirds, and neo-tropical songbirds.

Caddo Lake is a center for recreational activities and serves as a public water supply source for Marshall, Texas, and Louisiana municipalities. Oil production facilities are located within the lake (Crowley, 1993).

4.1.3 Flora and Fauna

The CLI conducted an Initial Species Inventory for LHAAP (CLI, 1995), in which listings were provided by vertebrate class of the probable species present either on LHAAP or in adjacent Caddo Lake. The total number of vertebrate species was estimated at 546, which represents 45 percent of the total vertebrate species reported for the state of Texas. In addition, numerous terrestrial and aquatic invertebrate species are believed to exist at LHAAP. The following discussion is based on information presented in the CLI report (CLI, 1995).

Mammals. Tom Brantley, a former forester at LHAAP, has confirmed the sighting of 32 mammalian species on LHAAP (Weston, 1998). Common mammals found at LHAAP include White-Tailed Deer, Red and Gray Foxes, Eastern Cottontail and Swamp Rabbits, Fox and Gray Squirrels, Opossums, Skunks, Armadillos, and Raccoons (USACE, 1992). **Table 4-2** lists mammals that have been sighted at LHAAP, as well as those species that may potentially be present. Those species that are "potentially" in the LHAAP area are based on mammal distribution records in Texas (Davis, 1974) and mammals that are known to inhabit the Cypress Bayou Basin (Campo, 1986). Based on these sources, as many as 51 mammalian species could exist at LHAAP. In addition to these 51 species, there are also unconfirmed sightings of the Louisiana Black Bear (*Ursus americanus luteolus)* and the Mountain Lion (*Felis concolor)* (CLI, 1995).

Birds. Brantley (1995) has sighted 159 bird species on the LHAAP property (LHAAP, 1993; CLI, 1995). **Table 4-3** lists birds that have been sighted at LHAAP, as well as those species that may potentially be present sometime during the year. The species that may potentially occur in the area are based on work by Ingold (1994) and Metzler (1994). Ingold (1994) documented bird species occurring in the Caddo Lake drainage system and lists a total of 333 bird species. In preparing a field checklist of the birds of Caddo Lake, including Caddo Lake State Park and the Wildlife Management Area, Metzler (1994) listed 167 bird species. Considering the Ingold and Metzler studies, approximately 334 bird species may occupy LHAAP at various times during the year (CLI, 1995).

Fish. No fish species list is available for Goose Prairie Creek, Central Creek, Harrison Bayou, or Saunders Branch. However, based on available species lists for Caddo Lake, these water bodies are believed to contain such fish types as shiners, bass, catfish, and sunfish.

Amphibians. **Table 4-4** lists the amphibian species that may be present at LHAAP or in the installation vicinity. Hardy (1994) lists 27 amphibian species that have been collected from the

Caddo Lake drainage system. Dixon (1987) reported that there could be 26 amphibian species in Harrison or Marion Counties, based on data from museum collections and a literature review. Brantley (1995) kept few records of amphibians at LHAAP. Based on these sources, as many as 31 amphibian species may exist at LHAAP (Weston, 1998).

Reptiles. **Table 4-5** lists the reptile species that may be present at LHAAP or in the vicinity. Hardy (1994) lists 54 reptile species that are known to exist in the area, based on his survey of regional reptile collections. Campo (1986) lists 10 reptile species in his report. Dixon (1987) reported that there could be 53 reptile species in Harrison or Marion Counties based on data from museum collections and a literature review. Brantley (1995) has confirmed sightings of 23 reptile species on LHAAP. Based on these sources, as many as 60 reptile species may exist at LHAAP (Weston, 1998).

Endangered, Threatened, and Rare Species. No endangered species are known to occur on the installation. There are 22 animal species that could potentially be present on or near LHAAP that appear on federal or state T&E species lists. The historic details regarding the number and date of species sightings are presented in the CLI report (CLI, 1995). Of the 22 animal species that could potentially be present, information received from USFWS (January 2003) and Texas Department of Parks and Wildlife (February 2003) identified the following list of threatened species that are known or suspected to occur in the vicinity of LHAAP (species that have been confirmed are listed in italics; see also **Tables 4-2** through **4-5**):

- Federal Listed Threatened Species:
  - Bald Eagle
  - Louisiana Black Bear

- State Listed Threatened Species:
  - Louisiana Black Bear
  - Rafinesque's Big-Eared Bat
  - Alligator Snapping Turtle
  - Timber Rattlesnake (see text below)
  - Bluehead Shiner

- State Species of Concern:
  - Southern Lady's Slipper

- State Special Features/Natural Communities/Managed Areas:
  - Colonial Waterbird Rookeries
  - Bald Cypress-Water Tupelo Series
  - Shortleaf Pine-Oak Series

- Water Oak-Willow Oak Series
- Caddo Lake State Park.

Some conflicting evidence is available regarding the potential presence of the Timber Rattlesnake at Longhorn. This State-listed species is described in historical site documents as being confirmed present on the site (see **Table 4-5**). However, although wildlife experts familiar with the site have indicated that potential habitat suitable for the Timber Rattlesnake is present on site and LHAAP is within this species' historical range, there is no recent documented evidence of this species being present on site, and it has not been observed by USFWS wildlife personnel stationed at the installation (Craig Giggleman, USFWS, personal communication). Therefore, it is assumed in this evaluation that the Timber Rattlesnake is potentially present, and it will be evaluated qualitatively, along with the Alligator Snapping, in the Uncertainty Section (**Section 8.0**).

4.2 Identification and Selection of Ecological Measurement Receptors

It is not feasible or necessary to evaluate risk for each and every wildlife species potentially present at a hazardous waste site. In USEPA's *Draft Ecological Soil Screening Level Guidance* (2000), *Ecological Risk Assessment Guidance for Superfund* (1997a), *Guidelines for Ecological Risk Assessment* (1998a), and in the TCEQ *Guidance for Conducting Ecological Risk Assessments at Remediation Sites in Texas* (TNRCC, 2001), it is suggested that a subset of wildlife species be selected as surrogate receptors (to be used as measurement receptors) to evaluate exposures and risks. Using measurement receptors as surrogates for other species or groups of organisms allows risks to be quantified for a site while not having to individually address every species that exists at a site.

Using the USEPA approaches, certain species are selected as "representatives" of other species within the same class (e.g., mammalian, avian, etc.) with similar diets and representing different trophic levels. A trophic level is a functional classification of taxa within a community that is based on feeding relationships (USEPA, 1997a; TNRCC, 2001). For example, aquatic and terrestrial plants make up the first trophic level, herbivores make up the second, omnivores make up the third, and carnivores make up to fourth trophic level. The advantages of focusing the ERA on generic trophic groups as opposed to specific species include, but are not limited to, the following:

- The approach provides results that can be applied across LHAAP regardless of the presence or absence of a particular species. The trophic groups selected are present or potentially present across LHAAP.
- The approach for selection of measurement receptors provides results that can be used to examine comparative risks associated with different exposure routes (e.g., ingestion of food versus soil ingestion) representing different contaminant transport

pathways (e.g., soil to herbivore, soil to ground insectivore, soil to soil invertebrate, and soil to plant) versus direct soil ingestion.

Information obtained during the characterization of the exposure setting (habitat mapping) was used to develop habitat-specific food webs that represent communities and guilds of receptors potentially exposed to COPECs at LHAAP. The two major habitat types at LHAAP are aquatic and terrestrial. Each of these habitat types was further divided into subcategories (aquatic: open lake, streams/creeks, wetland/bayou/lake edge; and terrestrial: pine forest, mixed forest, shrub, open, wetland/bayou). Trophic levels for both the terrestrial and aquatic habitat types were then identified. The terrestrial and aquatic food webs at LHAAP are presented in **Figures 4-3** and **4-4**. The following factors (USEPA, 1997a; 1998a; 1999a; TNRCC, 2001) were considered to identify measurement receptors at LHAAP:

- ***Ecological Relevance.*** Highly relevant receptors provide an important functional or structural aspect in the ecosystem. Attributes of highly relevant receptors typically fall under the categories of food, habitat, production, seed dispersal, pollination, and decomposition. Critical attributes include those that affect or determine the function or survival of a population. For example, a sustainable population of forage fish might be critical to the sustainability of a population of carnivorous game fish.

- ***Exposure Potential.*** Receptors with high exposure potentials are those that, due to their metabolism, feeding habits, location, or reproductive strategy, tend to have higher potentials for exposure than other receptors. For example, the metabolic rates of small receptors are generally higher than those for large animals. This results in a higher ingestion per body weight (i.e., increased exposure potential).

- ***Sensitivity.*** Highly susceptible receptors include those with low tolerances to a COPEC as well as receptors with enhanced COPEC susceptibility due to other concomitant stressors that may not be related to COPEC, such as reduced habitat availability. For example, raptorial birds are highly susceptible to the effects of chlorinated pesticides that bioaccumulate through the food chain.

- ***Social or Economic Importance.*** An assessment endpoint may also be based on socially or economically important receptors. These types of receptors include species valued for economic importance such as crayfish and game fish. For these receptors, critical attributes include those that affect survival, growth, production, and fecundity characteristics.

- ***Availability of Natural History Information***. Natural history information is essential to quantitatively evaluate risk to measurement receptors. If this information such as body weight, food, water, soil, and sediment ingestion rates is unavailable for the desired measurement receptor, a surrogate species should be selected. Uncertainty associated with using a surrogate species should be discussed.

Organisms on the first (primary) level of the food chain (e.g., plants, earthworms, etc.), while vital to the ecological stability of the food web, are typically not selected as measurement receptors because their position on the first level of the food chain limits the types of quantitative evaluations that may be applied and used to make decisions (e.g., food chain modeling), and because they do not represent ecological attributes of high social or economic importance (see bulleted list, above). However, at the request of stakeholders and because the Army wishes to move the Step3/BERA project forward, the Army has agreed in this site-specific case to select organisms at the base of the food chain as measurement receptors. The inclusion of plants and earthworms as measurement receptors is done solely to provide required information at LHAAP; project stakeholders have agreed that remediation decisions will not be made based on the outcome of the evaluation of these receptors. Risks to plants and earthworms are assessed under a direct toxicity evaluation that is used to determine whether exposure to chemicals in media may result in population declines in these organisms, which may affect the food supply for higher trophic level organisms (see **Section 7.0**).

The representative measurement receptors that were identified for each feeding guild for each habitat-specific food web are presented in **Table 4-6**. The following presents the rationale for the selection of measurement receptors identified for each of the feeding guilds evaluated for the installation-Wide ERA. Feeding guilds represented include herbivores, omnivores, insectivores, and carnivores; the feeding guild listed in the table represents the feeding guild that each measurement receptor species was selected to represent in the ERA. **Figure 4-5** presents the proposed trophic levels, feeding guilds, and measurement receptors for the assessment. The rationale and proposed receptors are presented below.

Terrestrial Habitats

Trophic Level 1 Terrestrial Primary Producer – Terrestrial Plants

- Terrestrial plants are selected as a measurement receptor at the request of stakeholders and to move the Step3/BERA project forward. The Army has agreed to this approach as a unique and site-specific deviation of Army policy, as it is acknowledged and agreed to by all parties that remediation at LHAAP to protect terrestrial plants will not occur. In addition, stakeholders have agreed that a risk management decision can be made at the end of Step 3 whereby further evaluation of plants is not required in Steps 4 through 8 of the ERA process for the purpose of assessing potential impacts to plants themselves. However, it may be necessary to evaluate the transfer of chemicals from soil to plant tissue in the BERA as part of a bioaccumulation pathway for the protection of other organisms that feed on plants.

Trophic Level 1 Terrestrial Primary Consumer – Terrestrial Invertebrates

- Terrestrial invertebrates are selected as a measurement receptor at the request of stakeholders and to move the Step3/BERA project forward. The Army has agreed to this approach as a unique and site-specific deviation of Army policy, as it is acknowledged and agreed to by all parties that remediation at LHAAP to protect terrestrial invertebrates will not occur. In addition, stakeholders have agreed that a risk management decision can be reached at the end of Step 3 whereby further evaluation of invertebrates is not required in Steps 4 through 8 of the ERA process for the purpose of assessing potential impacts to terrestrial invertebrates themselves. However, it may be necessary to evaluate the transfer of chemicals from soil to earthworm tissue in the BERA as part of a bioaccumulation pathway for the protection of other organisms that feed on terrestrial invertebrates.

Trophic Level 2 Terrestrial Herbivore – Deer Mouse

- The Deer Mouse is the measurement receptor to represent the assessment endpoint/ecological value that is protective of trophic level 2 terrestrial herbivores that inhabit both upland forest and shrub/scrub habitats (based on the Texas food web).
- A mammal was selected as the measurement receptor versus a bird because mammal TRVs are typically lower. This is especially true for metals that were the risk drivers in Steps 1 and 2. For example, of the 16 TRVs identified for metals during Steps 1 and 2, 13 TRVs for metals were lower for mammals than birds. When factoring in increased exposure frequencies and durations, the selection of a mammal for this trophic level is more protective.
- The Deer Mouse was selected to represent terrestrial trophic level 2 herbivores because:
  - It has a small home range (versus larger mammals and birds), increasing potential exposure to site contaminants.
  - It has continual direct contact with soils during foraging, resting, nesting, movement, etc. This increases potential exposure to site soil contaminants.
  - Deer mice are a major prey species to a wide variety of trophic level 4 carnivores to include owls, snakes, hawks, and carnivorous mammals.
  - Deer mice use a wide variety of habitats including woodlands (both deciduous and coniferous forests), prairies, and rocky habitats.
  - Deer mice have a metabolism that is 1.3 times higher than any other species in its genus. Therefore, its food intake rate is greater.
  - It is an opportunistic forager that is primarily granivorous.
  - The deer mouse (or an appropriate surrogate species) is likely to be readily collectable for tissue sampling if required.

A large amount of life history information is available in the literature for the Deer Mouse (in comparison to other potential receptors such as reptiles, amphibians, and arachnids). Extensive information allows completion of a more quantitative and defensible risk assessment that reduces the uncertainty and increases the validity of the risk assessment and decision-making process.

Trophic Level 3 Terrestrial Insectivore – American Woodcock

- The American Woodcock is the measurement receptor to represent the assessment endpoint/ecological value that is protective of trophic level 3 terrestrial insectivores that inhabit both upland forest and shrub/scrub habitats (based on the Texas food web).
- The American Woodcock was selected to represent terrestrial trophic level 3 insectivores because:
  - It has more intense direct contact with soils during foraging, resting, nesting, movement, etc. than other birds (e.g., robin), which increases potential exposure to site soil contaminants.
  - It has a diet that is nearly entirely earthworms.
  - American Woodcocks use moist, bottomland forests such as those that are present at LHAAP.

A large amount of life history information is available in the literature for the American Woodcock. Extensive information allows completion of a more quantitative and defensible risk assessment that reduces the uncertainty and increases the validity of the risk assessment and decision-making process.

Trophic Level 3 Terrestrial Omnivore – Raccoon

- The Raccoon was selected as a surrogate for the T&E species, the Louisiana Black Bear. The Raccoon is representative of Louisiana Black Bear because both species are in the Class *Mammalia*; both species are opportunistic foragers; both species are omnivores; and both species inhabit hardwood swamps, floodplain forests, and marshes.
- The Raccoon is protective of Louisiana Black Bear because they both have similar diets and habitats; however, the Raccoon does not enter a hibernation-like state in the winter (has a greater ED), has a smaller home range (increases exposure time), and has a higher metabolism (ingests more food per body weight).
- The Raccoon is the measurement receptor to represent the assessment endpoint/ecological value that is protective of trophic level 3 terrestrial omnivorous species. Additionally, though not directly identified as the measurement receptor, the Raccoon will be used to protect or represent the assessment endpoint for trophic level 3 aquatic omnivorous species because the Raccoon is also part of the freshwater/wetland food web.

- A mammal was selected as the measurement receptor versus a bird because mammal TRVs are typically lower. This is especially true for metals that were the risk drivers in Steps 1 and 2. For example, of the 16 TRVs identified for metals during Steps 1 and 2, 13 TRVs for metals were lower for mammals than birds. When factoring in increased exposure frequencies and durations, the selection of a mammal for this trophic level is more protective.

- It should be noted that two versions of the raccoon will be assessed. The first version will be a typical raccoon that is representative of trophic level 3 terrestrial omnivorous species. The second version will be a modified raccoon that is more closely aligned with a larger, bear-like omnivore designed to be protective of the Louisiana Black Bear.

- The Raccoon was selected to represent terrestrial trophic level 3 omnivorous species because:

  – It has a small home range, increasing potential exposure to site contaminants.

  – It is an opportunistic forager that ingests a wide range of food materials including terrestrial and aquatic prey species.

  – It inhabits both terrestrial and aquatic habitats.

  – It does not migrate, thereby increasing its ED and frequency.

  – It does not hibernate or aestivate, thereby increasing its ED and frequency.

  – It comes in direct contact with soils, sediments, and surface water.

A large amount of life history information is available in the literature for the Raccoon (in comparison to other potential receptors such as reptiles and amphibians). Extensive information allows completion of a more quantitative and defensible risk assessment that reduces the uncertainty and increases the validity of the risk assessment and decision-making process.

Trophic Level 3 Terrestrial Insectivore – Short-Tailed Shrew

- The Short-Tailed Shrew is the measurement receptor to represent the assessment endpoint/ecological value that is protective of trophic level 3 terrestrial insectivores that inhabit upland forest, shrub/scrub, and freshwater/wetland habitats (based on the Texas food web).

- The Short-Tailed Shrew was selected to represent this trophic level and feeding guild because the shrew had the highest HQs for the terrestrial receptors evaluated for trophic level 3 during the Steps 1 and 2 screening.

- The Short-Tailed Shrew was selected to represent terrestrial trophic level 3 insectivores because:

- It has a small home range (versus larger mammals and birds), increasing potential exposure to site contaminants.
- It has continual direct contact with soils during foraging, resting, nesting, movement, etc. This increases potential exposure to site soil contaminants.
- Shrews are a prey species to a wide variety of trophic level 4 carnivores including owls, raptors, fox, weasels, and other carnivorous mammals
- Shrews inhabit a wide variety of habitats and are common in areas of abundant vegetation and cool/moist habitats.
- Shrews have an extremely high metabolism, causing them to ingest approximately their body weight in food on a daily basis. Therefore, its food intake rate is very high compared to other mammals and birds of this trophic level.

A large amount of life history information is available in the literature for the Short-Tailed Shrew. Extensive information allows completion of a more quantitative and defensible risk assessment that reduces the uncertainty and increases the validity of the risk assessment and decision-making process.

Trophic Level 3 Terrestrial Insectivore – Townsend's Big Eared Bat

The Townsend's Big-Eared Bat was selected as an additional mammalian terrestrial insectivore receptor solely as a surrogate for the T&E species the Rafinesque's Big-Eared Bat. The Townsend's Big-Eared Bat is representative of the Rafinesque's Big-Eared Bat because both species are in the Class *Mammalia*, they have similar body weights, they are both nearly obligate insectivores (moths), neither species migrates long distances, and both species use buildings and tree cavities for night roosts. Also, neither species of big-eared bats are likely to hibernate in the southern portions of their range where LHAAP is located.

A sufficient amount of life history information is available in the literature for the Townsend's Big-Eared Bat to perform a quantitative and defensible risk assessment. However, some facets of its life history information are not as well known as for other receptors. In particular, the degree of uptake of chemicals from environmental media into moths is poorly studied, and few literature sources are available for determining the potential exposure incurred from ingesting the bat's obligate prey item. Furthermore, little toxicological information is available for bats, and it is unknown how similar (or different) bat toxicological responses are to other, more commonly studied organisms (e.g., rats) that are used in this ERA to represent all mammals. Therefore, the use of TRVs representing a bat's potential hazard based on other organism's responses represents a significant source of uncertainty for this receptor.

Trophic Level 4 Terrestrial Carnivore – Red Fox

- The Red Fox is the measurement receptor to represent the assessment endpoint/ecological value that is protective of trophic level 4 terrestrial carnivores that inhabit both upland forest, shrub/scrub, and freshwater/wetland habitats (per the Texas food web).

- The Red Fox was selected to represent terrestrial trophic level 4 carnivorous species because:

  – It has continual direct contact with soils during foraging, resting, movement, etc. This increases potential exposure to site soil contaminants.

  – The Red Fox is the most widely distributed carnivore in the world and can live in habitats ranging from Arctic areas to temperate deserts. The Red Fox utilize many types of habitats including cropland, farmland, brush, pasture, hardwood stands, and coniferous forests.

  – The Red Fox does not hibernate or migrate, increasing potential exposure to site contaminants.

  – It is an opportunistic forager that ingests a wide range of food materials including small mammals, insects, and birds. However, the Red Fox will seasonally feed on seeds, nuts, and fruits.

  – It inhabits both terrestrial and aquatic habitats.

A large amount of life history information is available in the literature for the Red Fox. Extensive information allows completion of a more quantitative and defensible risk assessment that reduces the uncertainty and increases the validity of the risk assessment and decision-making process.

Trophic Level 4 Terrestrial Carnivore – Red-Tailed Hawk

- The Red-Tailed Hawk is the measurement receptor to represent the assessment endpoint/ecological value that is protective of trophic level 4 terrestrial carnivores that inhabit both upland forest and shrub/scrub habitats (based on the Texas food web).

- The Red-Tailed Hawk was selected as a surrogate for the T&E species, the Bald Eagle. The Red-Tailed Hawk is representative of the Bald Eagle because both species are in the Class *Aves*, both species are opportunistic foragers, both species are carnivores with a significant component of fish in the diet, and both species inhabit hardwood swamps, floodplain forests, and marshes.

- The Red-Tailed Hawk was selected to represent terrestrial trophic level 4 carnivores because:

- It may be more sensitive to some site contaminants (e.g., pesticides) than mammalian carnivores.

- The Red-Tailed Hawk is one of the most widely distributed avian carnivores in the United States and can live in a wide range of habitats.

- It is an opportunistic forager that preys on the most common food source (usually small mammals).

- It is a year-round resident in many areas, increasing potential exposure to site contaminants.

A large amount of life history information is available in the literature for the Red-Tailed Hawk. Extensive information allows completion of a more quantitative and defensible risk assessment that reduces the uncertainty and increases the validity of the risk assessment and decision-making process.

<u>Aquatic Habitats</u>

Trophic Level 2 Aquatic Herbivore – Muskrat

- The Muskrat is the measurement receptor to represent the assessment endpoint/ecological value that is protective of trophic level 2 aquatic herbivores that inhabit freshwater/wetland (based on the Texas food web).

- A mammal was selected as the measurement receptor versus a bird because mammal TRVs are typically lower. This is especially true for metals that were the risk drivers in Steps 1 and 2. For example, of the 16 TRVs identified for metals during Steps 1 and 2, 13 TRVs for metals were lower for mammals than birds. When factoring in increased exposure frequencies and durations, the selection of a mammal for this trophic level is more protective.

- The Muskrat was selected to represent aquatic trophic level 2 herbivores because:

  - It has a relatively small home range in comparison to other similar species.

  - It has direct contact with soils/sediments during resting and burrowing and has contact with surface water during foraging and movement.

  - Muskrats spend most of their lives in bogs, marshes, lakes, or streams.

  - It feeds primarily on aquatic vegetation.

  - Muskrats are prey for many trophic level 3 and 4 predators.

A large amount of life history information is available in the literature for the Muskrat. Extensive information allows completion of a more quantitative and defensible risk assessment that reduces the uncertainty and increases the validity of the risk assessment and decision-making process.

Trophic Level 2 Aquatic Herbivore – Fathead Minnow

- The Fathead Minnow is the measurement receptor to represent the assessment endpoint/ecological value that is protective of herbivorous fish, including the state T&E species (Bluehead Shiner).
- The Fathead Minnow is an appropriate surrogate for the state T&E species (Bluehead Shiner) because:
  - Toxicity test methods addressing mortality are well established and accepted by the risk assessment community. Results of these tests can be applied to the Bluehead Shiner and other fish.
  - Both species are herbivores, and the life history of the Fathead Minnow and the Bluehead Shiner are similar and therefore are applicable to each other.
  - Fish tissue samples comprised of Fathead Minnow and other minnows can be used to assess the potential for contaminant uptake by Bluehead Shiners.

A large amount of life history information is available in the literature for the Fathead Minnow. Extensive information allows completion of a more quantitative and defensible risk assessment that reduces the uncertainty and increases the validity of the risk assessment and decision-making process.

Trophic Level 3 Aquatic Omnivore – Brown Bullhead Catfish

- The Brown Bullhead Catfish is the measurement receptor to represent the assessment endpoint/ecological value that is protective of omnivorous fish.
- Because catfish tend to be associated with lake and stream bottoms, the Brown Bullhead Catfish is a useful receptor for evaluating fish exposure to chemicals in sediment.

A large amount of life history information is available in the literature for the Brown Bullhead Catfish. Extensive information allows completion of a more quantitative and defensible risk assessment that reduces the uncertainty and increases the validity of the risk assessment and decision-making process.

The Fathead Minnow and Brown Bullhead Catfish are treated differently than other measurement receptors. These receptors were not included as measurement receptors in the food-chain modeling in Step 3; rather, body burden concentrations for these two species were estimated and compared with critical body residue (CBR) concentrations to identify potential risks due to exposure to chemicals in surface water (Fathead Minnow) or sediment (Brown Bullhead Catfish) (see **Section 7.0**).

Trophic Level 3 Aquatic Omnivore – Snapping Turtle

- The Snapping Turtle was selected as a surrogate for the state T&E species (Alligator Snapping Turtle). The life history of the Common Snapping Turtle and the Alligator Snapping Turtle are very similar and therefore are applicable to each other.
- Body weight of the Snapping Turtle is lower than the Alligator Snapping Turtle, increasing the potential for exposure and potential impacts.
- The Snapping Turtle is the measurement receptor to represent the assessment endpoint/ecological value that is protective of trophic level 3 aquatic omnivores and a state T&E species (Alligator Snapping Turtle).
- The one concern with selecting the Snapping Turtle to represent this trophic level and feeding guild is the lack of available TRVs for reptiles. However, it was decided that a surrogate representative for the T&E species was necessary.
- The Snapping Turtle was selected to represent aquatic trophic level 3 omnivorous species and the T&E species Alligator Snapping Turtle because:
    - It is primarily aquatic, inhabiting freshwater and brackish environments.
    - It spends a tremendous amount of time buried in mud and sediment with only the nostrils and eyes exposed. This increases exposure to contaminants in bottom sediments.
    - It is an aggressive forager that ingests a wide range of food materials including insects, crustaceans, clams, snails, earthworms, fish, frogs, salamanders, snakes, turtles, birds, small mammals, plant material, algae, and carrion.
    - It inhabits primarily aquatic habitats and commonly buries itself in lake bottom sediments.
    - Most turtles stay primarily in the same marsh or in one general area year after year. Therefore, home ranges can be small, increasing exposure to contaminants.
    - It comes in direct contact with soils, sediments, and surface water.

A large amount of life history information is available in the literature for the Snapping Turtle. Extensive information allows completion of a more quantitative and defensible risk assessment that reduces the uncertainty and increases the validity of the risk assessment and decision-making process.

Trophic Level 3 Aquatic Insectivore – Bank Swallow

- The Bank Swallow is the measurement receptor to represent the assessment endpoint/ecological value that is protective of trophic level 3 aquatic insectivores in freshwater/ wetland habitats (based on the Texas food web).
- The Bank Swallow was selected to represent and be protective of trophic level 3 aquatic insectivores because:
  - Swallows primarily feed on insects, with up to 90 percent of ingested insects being aquatic in nature.
  - Swallows feed over both terrestrial and aquatic environments.
  - Swallows have high metabolisms versus other birds (e.g., the marsh wren) that have less energy-intensive feeding styles (e.g., birds that do not feed in flight). High metabolisms require an increased intake of prey, causing a greater potential for the ingestion of contaminants.
  - Bank Swallows nest and rest in earthen banks, which increases their exposure to potentially contaminated soil and exposed bank sediments. In comparison, bird species that perch and nest off the ground are not exposed as frequently.
  - Bank Swallows ingest insects and can concentrate or bioaccumulate more chemicals than other species that are not insectivorous.
  - Bank Swallows are a prey species to trophic level 4 carnivores.

A large amount of life history information is available in the literature for the Bank Swallow (in comparison to other potential avian insectivores, reptiles and amphibians). Extensive information allows completion of a more quantitative and defensible risk assessment that reduces the uncertainty and increases the validity of the risk assessment and decision-making process.

Trophic Level 4 Aquatic Carnivore – Belted Kingfisher

- The Belted Kingfisher is the measurement receptor to represent the assessment endpoint/ecological value that is protective of trophic level 4 aquatic carnivorous avian species as part of the Texas freshwater/wetland food web. The Belted Kingfisher is typically found along rivers, streams, lakes and ponds, and is common on seacoasts and estuaries.
- The Belted Kingfisher is also protective of trophic level 4 aquatic carnivorous avian species because it has a smaller home range (increasing its ED) and lives in earthen burrows, which increases its exposure time to potentially contaminated soils and sediments. Lastly, Belted Kingfishers feed on crayfish, crabs, mussels, lizards, frogs, toads, small snakes, turtles, insects, and other small mammals, all of which increase its potential to ingest contaminated prey and impacted sediments and soils.

- The Belted Kingfisher was selected to represent trophic level 4 aquatic carnivorous species because:
  - It has a small home range (versus larger herons), increasing potential exposure to site contaminants.
  - It is an opportunistic forager that ingests a wide range of food materials including terrestrial and aquatic prey species.
  - It inhabits both shoreline and aquatic habitats.
  - It comes in direct contact with sediments and soils (through foraging and burrowing), and surface water.
  - Screening-level HQs were greater for the Belted Kingfisher compared to other trophic level 4 receptors (i.e., osprey).

A large amount of life history information is available in the literature for the Belted Kingfisher (in comparison to other potential receptors such as reptiles and amphibians). Extensive information allows completion of a more quantitative and defensible risk assessment that reduces the uncertainty and increases the validity of the risk assessment and decision-making process.

Trophic Level 4 Aquatic Carnivore – River Otter

- The River Otter is the measurement receptor to represent the assessment endpoint/ecological value that is protective of trophic level 4 aquatic carnivorous species.
- The River Otter was selected to represent trophic level 4 aquatic carnivorous species because:
  - Otters and other mustilidae (e.g., mink) are more sensitive to some contaminants (e.g., PCBs) than other aquatic carnivores.
  - It is an opportunistic forager that ingests a wide range of food materials including terrestrial and aquatic prey species.
  - It inhabits both shoreline and aquatic habitats.
  - It comes in direct contact with sediments and soils (through foraging and burrowing), and surface water.

A large amount of life history information is available in the literature for the River Otter. Extensive information allows completion of a more quantitative and defensible risk assessment that reduces the uncertainty and increases the validity of the risk assessment and decision-making process.

4.3 Identification of Complete Exposure Pathways

A preliminary identification of contaminant fate and transport, ecosystems potentially at risk, and complete exposure pathways was conducted in the Step 1 and 2 screening ERAs. In Step 3, the exposure pathways and the ecosystems associated with the assessment endpoints that were evaluated by the screening risk assessment are scrutinized in more detail (see **Section 5.0**). This effort involves compiling additional information on:

- Environmental fate and transport of the contaminants
- Complete exposure pathways (i.e., magnitude and extent of contamination, including its spatial and temporal variability relative to the assessment endpoints)

4.3.1 Contaminant Fate and Transport

Quantitative fate and transport evaluation (except as noted below for surface water) may be planned as part of the FS, which is not scheduled for completion until after the combined Step 3/BERA is performed. Therefore, quantitative fate and transport analysis of COPECs is not available for Step 3. Thus, the contaminant fate and transport evaluation will be limited to a qualitative analysis herein (see below) and the available modeling results for surface water.

If quantitative fate and transport data are available, they may be used in future steps of the site investigation process. A determination will then be made as to whether the COPECs at LHAAP are likely to persist, degrade, or move beyond the known extent of contamination. This characterization will include a review of the physical, chemical, and biological processes and the influence of these processes on the movement, persistence, form, toxicity, and availability of COPECs. The extent of information presented will be determined on the basis of the degree necessary for the purposes of characterizing ecological risk at LHAAP.

4.3.1.1 General Fate and Transport Considerations

Constituents may undergo several chemical processes in the environment:

- Degradation
- Complexation
- Ionization
- Precipitation
- Adsorption

Constituents may move through the environment by one or more means:

- Volatilization
- Erosion
- Deposition

- Weathering of parent material with subsequent transport
- Water transport

Several biological processes also affect constituent fate and transport in the environment:

- Bioaccumulation
- Bioconcentration
- Biodegradation
- Biological transformation
- Food chain transfer
- Excretion

The mechanisms of release along with the chemical and physical form of a constituent may affect its fate, transport and potential for reaching ecological receptors.

Constituents in source areas may potentially migrate toward downgradient receptor locations and may be transported to other environmental media. Constituents in the soil may remain persistent in the source area or may be transported via the following major migration pathways:

- Soil to groundwater
- Soil to surface water
- Soil to sediment
- Soil to air

In addition, once the constituent has migrated to other media, additional transport may potentially occur.

4.3.1.2 Evaluation of Modeled Surface Water Concentrations

Presently, there are very few data available for evaluating the potential of chemicals present in one medium to be transported to other medium or media at concentrations that may be ecologically significant. The only quantitative modeling available at the time of preparation of this Step 3 report involve modeled future concentrations in surface water from groundwater plumes and soil leachate, as presented in the *Final Modeling Report, Derivation of Soil and Groundwater Concentrations Protective of Surface Water and Sediment* (Shaw, 2007).

The chemicals selected for surface water modeling were COCs identified at individual sites in the baseline human health risk assessment and in the screening ERA for selected indicator species, conducted by Jacobs (Jacobs, 2003a). These chemicals presented potential unacceptable risk to human or ecological receptors. More recent data from the installation-wide perchlorate investigation identified perchlorate as an additional COC at some sites. Chemicals that were of concern for specific media or exceeded a maximum contaminant level (MCL) or an equivalent standard were designated as COCs for modeling. From this extensive list of chemicals at each site, a smaller number of target COCs were selected for modeling in order to keep the modeling effort focused on addressing primary issues at each site. The proportion of risk contributed by each COC at a specific site was also a factor in the COC selection (Shaw, 2004d). Not all chemicals that exceeded their respective MCLs or an equivalent standard at a specific site were modeled. Only those COCs that were predominant contributors to the cancer risk or non-cancer hazard at a site were selected for modeling. In addition, if a group of chemicals (e.g., solvents) contributed equally to risk, a subset of COCs was carefully selected for modeling if this subset could serve as surrogates for the other chemicals of the same group and had physical or chemical properties that classified them as appropriate representatives of the remaining COCs. Surrogates were selected for chemicals if they had comparatively high adsorption and short half-lives. Chemicals selected for modeling at one or more surface water bodies included perchlorate, 1,1-dichloroethene, trichloroethene, tetrachloroethene, cyclotrimethylenetrinitramine (RDX), vinyl chloride, 1,2-dichloroethene, methylene chloride, 1,1,1-trichloroethane, and 1,1,2-trichloroethane (Shaw, 2007).

Modeled concentrations of these chemicals in watershed surface water bodies were compared with the ecological benchmark screening values used for the Step 3 evaluation (**Section 6.2.1.2**). Some chemicals were modeled that were not detected in any surface water sample (i.e., tetrachloroethane, pentachlorophenol, 1,1,1-trichloroethane, and 1,1,2-trichloroethane).

Comparisons of modeled concentrations to ecological surface water screening concentrations are presented in **Table 4-7**. No modeled surface water concentration from soil or groundwater exceeds the screening concentration. Therefore, it may be concluded that future migration of these chemicals from soil or groundwater to surface water is not likely to adversely affect the environment at LHAAP. As there are some uncertainties associated with calibration and literature based degradation rates used in the Modeling Report (Shaw, 2007), monitoring of surface water may be included in site-specific responses at Sites where contaminated water may threaten surface water.

4.3.2 Exposure Pathways and Routes

A complete exposure pathway requires (1) a source of the chemical and mechanism of release of the chemical, (2) a transport or retention medium, (3) a point of exposure or contact with the chemical, and (4) an exposure route (e.g., ingestion, dermal contact) to the receptor. An exposure pathway is considered to be potentially complete if the ecological receptor can have contact with COPECs in a medium. **Table 4-8** presents preliminary potential ecological exposure pathways for LHAAP. The exposure pathway analysis evaluates the identified potentially complete exposure pathways at LHAAP for food chain modeling. The key potential release mechanisms, transport media, exposure points, exposure media, exposure routes and receptors for the identified habitats are considered.

Potential exposure routes for the terrestrial and aquatic receptors at LHAAP may include:

- Adsorption/absorption of COPECs in soil by soil microfauna (e.g., nematodes, earthworms)
- Ingestion of COPECs in soil by soil dwelling organisms and non-soil dwelling organisms
- Ingestion of COPECs in surface water
- Ingestion of COPECs in sediments from waterways
- Absorption via dermal exposure
- Herbivore exposure resulting from ingestion of COPECs in food items (bioaccumulation)
- Insectivore exposure resulting from ingestion of COPECs in food items (bioaccumulation)
- Carnivore exposure resulting from ingestion of COPECs in food items (bioaccumulation)
- Omnivore exposure resulting from ingestion of COPECs in food items (bioaccumulation)
- Exposure (adsorption/absorption and ingestion) to COPECs for early life stages of amphibians using aquatic and wetland resources
- Dermal exposure as a result of contact with COPECs in sediments or surface water
- Ingestion of COPECs in sediments and microfauna as a result of feeding activity
- Multiple transfer of COPECs within a food chain (e.g., oligochaete to odoneate to fish to bird) (biomagnification)

Aquatic species of plants and animals are generally inescapably immersed in the water medium. Water-soluble constituents can enter an aquatic organism through the body surfaces (dermal and ocular), gills, and mouth. Therefore, any COPECs associated with the water, sediment, or food sources can provide a direct exposure route for aquatic organisms. In addition, groundwater discharge to surface water or runoff from soil can also provide an indirect source of exposure to aquatic life.

Similarly, terrestrial species can become exposed through multiple routes due to their activity and proximity to the source areas. The activity of terrestrial wildlife onsite is unlimited. Terrestrial wildlife can become exposed to COPECs by ingestion of soil, surface water, sediment, inhalation of airborne contaminants, and dermal contact with soil, surface water and sediment. In addition, potential constituents that have been taken up by food can be ingested and absorbed through the digestive tract. The transfer of COPECs among various trophic levels is facilitated by constituent uptake by predator species. For example, an earthworm may create a pathway of exposure to amphibians/reptiles, some mammals, and birds.

Ingestion is considered to be the major exposure route for all wildlife species. Although dermal contact and inhalation of COPECs are possible, these exposure routes are considered minor relative to ingestion. Dermal and inhalation exposure routes for wildlife are typically not addressed due to the lack of science supporting the evaluations. Toxicity information for these routes is limited and their significance is generally considered to be relatively minor compared with oral exposure at most sites. Dermal exposure is assumed to be negligible for birds and mammals due to the presence of fur and feathers. Some circumstances may exist where dermal and inhalation exposure may be significant, such as for amphibians, burrowing wildlife, and those species that inhabit burrows of others. However, based on COPEC fate and transport considerations, it is unlikely that conditions favoring dermal and inhalation exposure routes exist at LHAAP. The major exposure pathways that are quantitatively evaluated include ingestion of soil, surface water, and sediment as well as consumption of COPECs in food items. COPECs may be present in food items as a result of direct uptake from soil, surface water or sediment as well as from bioaccumulation through the food chain. Terrestrial food items for the measurement receptors include terrestrial plants, earthworms, soil invertebrates, small mammals, and birds. Aquatic food items for the measurement receptors include aquatic plants, aquatic invertebrates, and fish.

4.3.3 Conceptual Site Model

The ecological conceptual exposure model for the installation-wide ERA at LHAAP integrates and summarizes the information concerning sources, constituent migration pathways, exposure routes, and measurement receptors into a combination of exposure pathways. The conceptual model for the LHAAP is presented in **Figure 4-6**. This model identifies the key potential release mechanisms, transport media, exposure media, exposure routes, and measurement receptors for the installation-wide ERA. The identified potential exposure pathways included in this model are complete pathways (i.e., COPECs are expected to reach receptors). Other potentially complete exposure pathways and receptors exist, however they are considered to be conservatively represented by the pathways and receptors included in the model.

Table 4-1
Vegetation Types at LHAAP

Table 4-2
Mammals Present or Potentially Present at LHAAP

Table 4-3
Birds Present or Potentially Present at LHAAP

Table 4-4
Amphibians Present or Potentially Present at LHAAP

Table 4-5
Reptiles Present or Potentially Present at LHAAP

Table 4-6
Characterization of Measurement Receptors

Table 4-7
Comparison of Modeled Concentrations in Surface Water to Ecological Screening Concentrations

Table 4-8
Preliminary Potential Ecological Exposure Pathway

Table 4-1
Vegetation Types at LHAAP

Vegetation Type	Acres	Percent
Grassland/Forbland	45	0.53
Shrubland/Old Field	414	4.87
Developed	620	7.30
Pine Forest	1,998	23.53
Mixed Pine/Hardwood	3,371	39.69
Upland Hardwood	156	1.84
Bottomland Hardwood	1,685	19.84
Cypress Swamp	176	2.07
Water	28	0.33
TOTAL	8,493	100.00

Notes:

Data provided are for the entire LHAAP installation.

LHAAP Longhorn Army Ammunition Plant

Table 4-2
Mammals Present or Potentially Present at LHAAP

Common Name	Scientific Name	Potentially Present[a]	Confirmed Presence[b]
Virginia Opossum	*Didelphius virginiana*		√
Eastern Mole	*Scalopus aquaticus*		√
Southern Short-tailed Shrew	*Blarina carolinensis*		√
Least Shrew	*Cryptotis parva*	√	
Southeastern Myotis Bat	*Myotis austroriparius*	√	
Silver-haired Bat	*Lasionycteris noctivagans*	√	
Eastern Pipstrelle	*Pipistrellus subflavus*	√	
Big Brown Bat	*Eptesicus fuscus*	√	
Eastern Red Bat	*Lasiurus borealis*	√	
Seminole Bat	*Lasiurus seminolus*	√	
Evening Bat	*Nycticeius humeralis*	√	
Rafinesque's Big-eared Bat	*Plecotus rafinesquii*		√[c]
Brazilian Free-tailed Bat	*Tadarida brasiliensis*	√	
Louisiana Black Bear	*Ursus americanus luteolus*	√[d]	
Mountain Lion	*Felis concolor*	√[d]	
Raccoon	*Procyon lotor*		√
Ringtail	*Bassariscus astutus*	√	
Long-tailed Weasel	*Mustela frenata*		√
Mink	*Mustela vison*		√
River Otter	*Lutra Canadensis*		√
Eastern Spotted Skunk	*Spilogale putorius*	√	
Striped Skunk	*Mephitis mephitis*		√
Red Fox	*Vulpes vulpes*		√
Common Gray Fox	*Urocyon cinereoargenteus*		√
Coyote	*Canis latrans*		√
Bobcat	*Lynx rufus*		√
Eastern Gray Squirrel	*Sciurus carolinensis*		√
Eastern Fox Squirrel	*Sciurus niger*		√
Eastern Flying Squirrel	*Glaucomys volans*		√
Baird's Pocket Gopher	*Geomys breviceps*		√
Hispid Pocket Mouse	*Chaetodipus hispidus*		√
American Beaver	*Castor Canadensis*		√
Fulvous Harvest Mouse	*Reithrodontomys fulvescens*		√
White-footed Mouse	*Peromyscus leucopus*		√
Cotton Mouse	*Peromyscus gossypinus*		√
Golden Mouse	*Ochrotomys nuttalli*	√	
Marsh Rice Rat	*Oryzomys palustris*		√
Deer Mouse	*Perimyscus maniculatus*	√	
Northern Pygmy Mouse	*Baiomys taylori*	√	
Hispid Cotton Rat	*Sigmodon hispidus*		√
Eastern Woodrat	*Neotoma floridana*		√
Woodland Vole	*Microtus pinetorum*	√	
Common Muskrat	*Ondatra zibethicus*		√
House Mouse	*Mus musculus*		√

Table 4-2
Mammals Present or Potentially Present at LHAAP

Common Name	Scientific Name	Potentially Present[a]	Confirmed Presence[b]
Roof Rat	*Rattus rattus*		√
Norway Rat	*Rattus norvegicus*		√
Nutria	*Myocastor coypus*		√
Eastern Cottontail	*Sylvilagus floridanus*		√
Black-tailed Jackrabbit	*Lepus californicus*	√	
Swamp Rabbit	*Sylvilagus aquaticus*		√
White-tailed Deer	*Odocoileus virginianus*		√
Nine-banded Armadillo	*Dasypus novemcinctus*		√

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Davis, W.B., 1974, *The Mammals of Texas* (Bulletin 41), Texas Parks and Wildlife Department, Austin, Texas (as cited in CLI 1995).

Longhorn Army Ammunition Plant, 1993, *Natural Resources Management 5-Year Plan*, 1993–1997.

Weston (Roy F. Weston, Inc.), 1998, *Final Group 2 Baseline Risk Assessment Work Plan*, *Longhorn Army Ammunition Plant, Karnack, Texas*, September 1998.

[a] Based on data from Davis (1974) and Campo (1986)
[b] Based on on-site observations by Brantley (LHAAP 1993)
[c] Based on confirmed sightings by TPWD personnel in 2003
[d] Based on unconfirmed reports by citizens, Texas Parks and Wildlife Department, and others (CLI 1995)

LHAAP Longhorn Army Ammunition Plant

Table 4-3
Birds Present or Potentially Present at LHAAP

Common Name	Scientific Name	Potentially Present[a]	Confirmed Presence[b]
Red-throated Loon	*Gavia stellata*	√	
Yellow-throated Loon	*Gavia adamsii*	√	
Pacific Loon	*Gavia pacific*	√	
Common Loon	*Gavia immer*		√
Pied-billed Grebe	*Podilymbus podiceps*		√
Horned Grebe	*Podiceps auritus*		√
Least Grebe	*Podiceps dominicus*		√
Eared Grebe	*Podiceps nigricollis*		√
Red-necked Grebe	*Podiceps grisegena*	√	
Western Grebe	*Aechmophorus occidentalis*	√	
American White Pelican	*Pelecanus erythrorhynchos*		√
Brown Pelican	*Pelecanus occidentalis*	√	
Double-crested Cormorant	*Phalacrocorax auritus*		√
Olivaceous Cormorant	*Phalacrocorax olivaceus*	√	
Anhinga	*Anhinga anhinga*		√[c]
American Bittern	*Botaurus lentiginosus*		√
Least Bittern	*Ixobrychus exilis*	√	
Great Blue Heron	*Ardea herodias*		√
Great Egret	*Casmerodius albus*		√
Snowy Egret	*Egretta thula*		√
Reddish Egret	*Egretta rufescens*	√	
Little Blue Heron	*Egretta caerulea*		√
Tricolored Heron	*Egretta tricolor*		√
Cattle Egret	*Bubulcus ibis*		√
Green Heron	*Butorides virescens*		√
Black-crowned Night Heron	*Nycticorax nycticorax*	√	
Yellow-crowned Night Heron	*Nyctanassa violacea*		√
White Ibis	*Eudocimus albus*	√	
White-faced Ibis	*Plegadis chihi*	√	
Roseate Spoonbill	*Ajaia ajaja*	√	
Wood Stork	*Mycteria americana*		√
Black-bellied Whistling Duck	*Dendrocygna autumnalis*		√
Tundra Swan	*Olor columbianus*	√	
Mute Swan	*Cygnus olor*	√	
Greater White-fronted Goose	*Anser albifrons*	√	
Snow Goose	*Chen caerulescens*		√
Ross's Goose	*Chen rossii*	√	
Canada Goose	*Branta canadensis*		√
Wood Duck	*Aix sponsa*		√
Green-winged Teal	*Anas crecca*		√
American Black Duck	*Anas rubipens*		√
Mallard	*Anas platyrhynchos*		√
Mottled Duck	*Anas fulvigula*	√	
Northern Pintail	*Anas acuta*		√

Table 4-3
Birds Present or Potentially Present at LHAAP

Common Name	Scientific Name	Potentially Present[a]	Confirmed Presence[b]
Blue-winged Teal	*Anas discors*		√
Cinnamon Teal	*Anas cyanoptera*	√	
Northern Shoveler	*Anas clypeata*		√
Gadwall	*Anas strepera*		√
American Widgeon	*Anas americana*		√
Canvasback	*Aythya valisineria*		√
Redhead	*Aythya americana*		√
Ring-necked Duck	*Aythya collaris*		√
Greater Scaup	*Aythya marila*	√	
Lesser scaup	*Aythya affinis*		√
Oldsquaw	*Clangula hyemalis*		√
White-winged Scoter	*Melanitta fusca*	√	
Surf Scoter	*Melanitta perspicillata*	√	
Common Goldeneye	*Bucephala clangula*		√
Bufflehead	*Bucephala albeola*		√
Hooded Merganser	*Lophodytes cucullatus*	√	
Common Merganser	*Mergus merganser*		√
Red-breasted Merganser	*Mergus serrator*	√	
Ruddy Duck	*Oxyura jamaicensis*		√
Black Vulture	*Coragyps atratus*		√
Turkey Vulture	*Cathartes aura*		√
Osprey	*Pandion haliaetus*		√
Bald Eagle	*Haliaeetus leucocephalus*		√
Golden Eagle	*Aquila chrysaetos*	√	
American Swallow-tailed Kite	*Elanoides forficatus*	√	
White-tailed Kite	*Elanus leucurus*	√	
Mississippi Kite	*Ictinia mississippiensis*		√
Northern Harrier	*Circus cyaneus*		√
Sharp-shinned Hawk	*Accipiter striatus*		√
Cooper’s Hawk	*Accipiter cooperii*		√
Red-shouldered Hawk	*Buteo lineatus*		√
Broad-winged Hawk	*Buteo platypterus*	√	
Swainson’s Hawk	*Buteo swainsoni*	√	
Red-tailed Hawk	*Buteo jamaicensis*		√
Ferruginous Hawk	*Buteo regalis*	√	
Rough-legged Hawk	*Buteo lagopus*		√
American Kestrel	*Falco sparverius*		√
Merlin	*Falco columbarius*	√	
Peregrine Falcon	*Falco peregrinus*	√	
Greater Prairie Chicken	*Tympanuchus cupido*	√	
Wild Turkey	*Meleagris gallopavo*		√
Northern Bobwhite	*Collinus virginianus*		√
Yellow Rail	*Coturnicops noveboracensis*	√	
Black Rail	*Laterallus jamaicensis*	√	

Table 4-3
Birds Present or Potentially Present at LHAAP

Common Name	Scientific Name	Potentially Present[a]	Confirmed Presence[b]
King Rail	*Rallus elegans*		√
Virginia Rail	*Rallus limicola*	√	
Sora	*Porzana carolina*		√
Purple Gallinule	*Porphyrula martinica*		√
Common Moorhen	*Gallinula chloropus*		√
American Coot	*Fluica americana*		√
Sandhill Crane	*Grus canadensis*	√	
Black-bellied Plover	*Pluvialis squatrarola*	√	
American Golden-Plover	*Charadrius dominica*		√
Semipalmated Plover	*Charadrius semipalmatus*	√	
Piping Plover	*Charadrius melodus*	√	
Killdeer	*Charadrius vociferus*		√
Black-necked Stilt	*Himantopus mexicanus*	√	
American Avocet	*Recurvirostra americana*	√	
Greater Yellowlegs	*Tringa melanolenca*	√	
Lesser Yellowlegs	*Tringa flavipes*		√
Solitary Sandpiper	*Tringa solitaria*	√	
Willet	*Catoptrophorus semipalmatus*	√	
Spotted Sandpiper	*Actitis macularia*	√	
Upland Sandpiper	*Bartramia longicauda*	√	
Long-billed Curlew	*Numenius americanus*	√	
Hudsonian Godwit	*Limosa haemastica*	√	
Whimbrel	*Numenius phaeopus*	√	
Ruddy Turnstone	*Arenaria interpres*	√	
Sanderling	*Calidris alba*	√	
Semipalmated Sandpiper	*Calidris pusilla*	√	
Western Sandpiper	*Calidris mauri*	√	
Least Sandpiper	*Calidris minutilla*	√	
White-rumped Sandpiper	*Calidris fuscicollis*	√	
Baird's Sandpiper	*Calidris bairdii*	√	
Pectoral Sandpiper	*Calidris melanotos*	√	
Dunlin	*Calidris alpina*	√	
Stilt Sandpiper	*Calidris himantopus*	√	
Buff-breasted Sandpiper	*Tryngites subruficollis*	√	
Short-billed Dowitcher	*Limnodromus griseus*	√	
Long-billed Dowitcher	*Limnodromus scolopaceus*	√	
Common Snipe	*Copella gallinago*		√
American Woodcock	*Scolopax minor*		√
Wilson's Phalarope	*Phalaropus tricolor*	√	
Red-necked Phalarope	*Lobipes lobatus*	√	
Laughing Gull	*Larus atricilla*	√	
Franklin's Gull	*Larus pipixcan*	√	
Bonaparte's Gull	*Larus philadelphia*	√	
Ring-billed Gull	*Larus delawarensis*	√	

Table 4-3
Birds Present or Potentially Present at LHAAP

Common Name	Scientific Name	Potentially Present[a]	Confirmed Presence[b]
Herring Gull	*Larus argentatus*	√	
Great Black-backed Gull	*Larus marinus*	√	
Black-legged Kittiwake	*Rissa tridactyla*	√	
Glaucous Gull	*Larus hyperboreus*	√	
Caspian Tern	*Sterna caspia*	√	
Sooty Tern	*Sterna fuscata*	√	
Common Tern	*Sterna hirundo*	√	
Forster's Tern	*Sterna forsteri*	√	
Least Tern	*Sterna antillarum*	√	
Black Tern	*Chlidonias niger*	√	
Rock Dove	*Columba livia*		√
Band-tailed Pigeon	*Columba fasciata*	√	
Ringed Turtle Dove	*Streptopelia risoria*	√	
White-winged Dove	*Zenaida asiatica*	√	
Mourning Dove	*Zenaida macroura*		√
Inca Dove	*Columbina inca*		√
Common Ground Dove	*Columbina passerina*	√	
Carolina Parakeet	*Canuropsis carolinensis*	√	
Black-billed Cuckoo	*Coccyzus erythropthalmus*	√	
Yellow-billed Cuckoo	*Coccyzus americanus*		√
Greater Roadrunner	*Geococcyx californianus*		√
Groove-Billed Ani	*Crotophaga sulcirostris*	√	
Barn Owl	*Tyto alba*		√
Eastern Screech Owl	*Otus asio*		√
Great Horned Owl	*Bubo virginianus*	√	
Snowy Owl	*Nyctea scandiaca*	√	
Burrowing Owl	*Athene cunicularia*	√	
Barred Owl	*Strix varia*		√
Long-eared Owl	*Asio otus*	√	
Short-eared Owl	*Asio flammeus*	√	
Common Nighthawk	*Chordeiles minor*		√
Chuck will's widow	*Caprimulgus carolinensis*		√
Whip poor will	*Caprimulgus vociferus*	√	
Chimney Swift	*Chaetura pelagica*		√
Ruby-throated Hummingbird	*Archilochus colubris*		√
Broad-tailed Hummingbird	*Selasphorus platycercus*	√	
Rufous Hummingbird	*Selasphorus rufus*	√	
Belted Kingfisher	*Ceryle alcyon*		√
Red-headed Woodpecker	*Melanerpes erythrocephalus*		√
Red-bellied Woodpecker	*Melanerpes carolinus*		√
Yellow-bellied Sapsucker	*Sphyropicus varius*		√
Downy Woodpecker	*Picoides pubescens*		√
Hairy Woodpecker	*Picoides villosus*		√
Northern Flicker	*Colaptes auratus*		√

Table 4-3
Birds Present or Potentially Present at LHAAP

Common Name	Scientific Name	Potentially Present[a]	Confirmed Presence[b]
Pileated Woodpecker	*Dryocopus pileatus*		√
Ivory-billed Woodpecker	*Campephilus principalis*	√	
Olive-sided Flycatcher	*Cantopus borealis*	√	
Eastern Wood-pewee	*Contopus virens*		√
Yellow-bellied Flycatcher	*Empidonax flaviventris*	√	
Acadian Flycatcher	*Empidonax virescens*	√	
Willow (Trail's) Flycatcher	*Empidonax traillii*	√	
Least Flycatcher	*Empidonax minimus*	√	
Eastern Phoebe	*Sayornis phoebe*		√
Say's Phoebe	*Sayornis saya*	√	
Vermillion Flycatcher	*Pyrocephalus rubinus*	√	
Ash-throated Flycatcher	*Myiarchus cinerascens*	√	
Great crested Flycatcher	*Myiarchus crinitus*	√	
Western Kingbird	*Tyrannus verticalis*	√	
Eastern Kingbird	*Tyrannus tyrannus*		√
Scissor-tailed Flycatcher	*Tyrannus forficatus*		√
Horned Lark	*Eremophila alpestris*	√	
Purple Martin	*Progne subis*		√
Tree Swallow	*Tachycineta bicolor*	√	
Northern Rough-winged Swallow	*Stelgidopteryx serripennis*	√	
Bank Swallow	*Riparia riparia*		√
Cliff Swallow	*Hirundo pyrrhonota*	√	
Barn Swallow	*Hirundo rustica*	√	
Blue Jay	*Cyanocitta cristata*		√
American Crow	*Corvus brachyrhynchos*		√
Fish Crown	*Corvus ossifragus*		√
Black-capped Chickadee	*Parus atricapillus*	√	
Carolina Chickadee	*Parus carolinensis*		√
Tufted Titmouse	*Parus bicolor*		√
Red-breasted Nuthatch	*Sitta canadensis*		√
White-breasted Nuthatch	*Sitta carolinensis*	√	
Brown-headed Nuthatch	*Sitta pusilla*		√
Brown Creeper	*Certhia americana*		√
Carolina Wren	*Thryothorus ludovicianus*		√
Bewick's Wren	*Thryomanes berrickii*	√	
House Wren	*Troglodytes aedon*	√	
Winter Wren	*Troglodytes troglodytes*	√	
Sedge Wren	*Cistothorus platensis*		√
Marsh Wren	*Cistothorus palustris*		√
Rock Wren	*Salpinctes obsoletus*	√	
Golden-crowned Kinglet	*Regulus satrapa*		√
Ruby-crowned Kinglet	*Regulus calendula*		√
Blue-gray Gnatcatcher	*Polioptila caerulea*		√

Table 4-3
Birds Present or Potentially Present at LHAAP

Common Name	Scientific Name	Potentially Present[a]	Confirmed Presence[b]
Eastern Bluebird	*Sialia sialis*		√
Veery	*Catharus fuscescens*		√
Gray-cheeked Thrush	*Catharus minimus*	√	
Swainson's Thrush	*Catharus ustulatus*		√
Hermit Thrush	*Catharus guttatus*		√
Wood Thrush	*Hylocichla mustelina*		√
American Robin	*Turdus migratorius*		√
Gray Catbird	*Dumetella carolinensis*		√
Northern Mockingbird	*Mimus polyglottos*		√
Brown Thrasher	*Toxostoma rufum*		√
American Pipit	*Anthus rubescens*	√	
Sprague's Pipit	*Anthus spragueii*	√	
Cedar Waxwing	*Bombycilla cedrorum*		√
Loggerhead Shrike	*Lanius ludovicianus*		√
European Starling	*Sturnus vulgaris*		√
White-eyed Vireo	*Vireo grisens*		√
Bell's Vireo	*Vireo bellii*	√	
Solitary Vireo	*Vireo solitarius*	√	
Yellow-throated Vireo	*Vireo flavifrons*	√	
Warbling Vireo	*Vireo gilvus*	√	
Philadelphia Vireo	*Vireo philadelphicus*	√	
Red-eyed Vireo	*Vireo olivaceus*	√	
Blue-winged Warbler	*Vermivora pinus*	√	
Golden-winged Warbler	*Vermivora chrysoptera*	√	
Tennessee Warbler	*Vermivora peregrina*	√	
Orange-crowned Warbler	*Vermivora celata*	√	
Nashville Warbler	*Vermivora ruficapilla*	√	
Northern Parula Warbler	*Parula americana*		√
Yellow Warbler	*Dendroica petechia*		√
Chestnut-sided Warbler	*Dendroica pensylvanica*	√	
Magnolia Warbler	*Dendroica magnolia*	√	
Black-throated Blue Warbler	*Dendroica caerulescens*	√	
Yellow-rumped Warbler	*Dendroica coronata*		√
Black-throated Green Warbler	*Dendroica virens*	√	
Blackburnian Warbler	*Dendroica fusca*	√	
Yellow-throated Warbler	*Dendroica dominica*		√
Pine Warbler	*Dendroica pinus*		√
Prairie Warbler	*Dendroica discolor*	√	
Palm Warbler	*Dendroica palmarum*	√	
Bay-breasted Warbler	*Dendroica castanea*	√	
Blackpoll Warbler	*Dendroica striata*	√	
Cerulean Warbler	*Dendroica cerulea*		√
Black and White Warbler	*Mniotilta varia*		√
American Redstart	*Setophaga ruticilla*		√

Table 4-3
Birds Present or Potentially Present at LHAAP

Common Name	Scientific Name	Potentially Present[a]	Confirmed Presence[b]
Prothonotary Warbler	*Prothonotaria citrea*		√
Worm-eating Warbler	*Helmintheros vermivorus*	√	
Swainson's Warbler	*Limnothlypis swainsonii*	√	
Ovenbird	*Seiurus aurocapillus*	√	
Northern Waterthrush	*Seiurus noveboracensis*	√	
Louisiana Waterthrush	*Seiurus motacilla*		√
Kentucky Warbler	*Oporornis formosus*	√	
Connecticut Warbler	*Oporornis agilis*	√	
Mourning Warbler	*Oporornis philadelphia*	√	
Common Yellowthroat	*Geothlypis trichas*		√
Hooded Warbler	*Wilsonia citrina*	√	
Wilson's Warbler	*Wilsonia pusilla*	√	
Canada Warbler	*Wilsonia canadensis*	√	
Yellow-breasted Chat	*Icteria virens*		√
Summer Tanager	*Piranga rubra*		√
Scarlet Tanager	*Piranga olivacea*		√
Western Tanager	*Piranga ludoviciana*	√	
Northern Cardinal	*Cardinalis cardinalis*		√
Rose-breasted Grosbeak	*Pheucticus ludovicianus*		√
Black-Headed Grosbeak	*Pheucticus melanocephalus*	√	
Blue Grosbeak	*Guiraca caerulea*		√
Indigo Bunting	*Passerina cyanea*		√
Lazuli Bunting	*Passerina amoena*	√	
Painted Bunting	*Passerina ciris*		√
Dickcissel	*Spiza Americana*	√	
Rufous-sided Towhee	*Pipilo erythrophthalmus*		√
Green-tailed Towhee	*Pipilop chlorurus*	√	
Lark Bunting	*Calamospiza melanocorys*	√	
Bachman's Sparrow	*Aimophila aestivalis*		√
American Tree Sparrow	*Spizella arborea*	√	
Chipping Sparrow	*Spizella passerina*		√
Clay-colored Sparrow	*Spizella pallida*		√
Field Sparrow	*Spizella pusilla*		√
Vesper Sparrow	*Pooecetes gramineus*		√
Lark Sparrow	*Chondestes grammacus*	√	
Black-throated Sparrow	*Amphispiza bilineata*	√	
Savannah Sparrow	*Passerculus sandwichensis*	√	
Grasshopper Sparrow	*Ammodramus savannarum*	√	
Henslow's Sparrow	*Ammodramus henslowii*	√	
LeConte's Sparrow	*Ammodramus leconteii*	√	
Sharp-tailed Sparrow	*Ammodramus caudacutus*	√	
Fox Sparrow	*Passerella iliaca*		√
Song Sparrow	*Melopiza melodia*		√
Lincoln's Sparrow	*Melospiza lincolnii*	√	

Table 4-3
Birds Present or Potentially Present at LHAAP

Common Name	Scientific Name	Potentially Present[a]	Confirmed Presence[b]
Swamp Sparrow	*Melospiza geogiana*		√
White-throated Sparrow	*Zonotrichia albicollis*		√
Golden-crowned Sparrow	*Zonotrichia atricapilla*	√	
White-crowned Sparrow	*Zonotrichia leucophys*		√
Harris' Sparrow	*Zonotrichia querula*	√	
Dark-eyed Junco	*Junco hyemalis*		√
Lapland Longspur	*Calcarius lapponicus*	√	
Bobolink	*Dolichonyx oryzivorus*	√	
Red-winged Blackbird	*Agelaius phoeniceus*		√
Eastern Meadowlark	*Sturnella magna*		√
Western Meadowlark	*Sturnella neglecta*		√
Yellow-headed Blackbird	*Xanthocephalus xanthocephalus*	√	
Brewer's Blackbird	*Euphagus cyanecephalus*		√
Rusty Blackbird	*Euphagus carolinus*		√
Great-tailed Grackle	*Quiscalus mexicanus*	√	
Common Grackle	*Quiscalus quiscula*		√
Brown-headed Cowbird	*Molothrus ater*		√
Orchard Oriole	*Icterus spurious*		√
Northern Oriole	*Icterus galbula*	√	
Purple Finch	*Carpodacus purpureus*		√
House Finch	*Carpodacus mexicanus*	√	
Red Crossbill	*Loxia curvirostra*	√	
Pine Siskin	*Carduelis pinus*		√
American Goldfinch	*Carduelis tristis*		√
Evening Grosbeak	*Coccothrastes vespertinus*	√	
House Sparrow	*Passer domesticus*		√

CLI (Caddo Lake Institute), 1995, *Initial Species Inventory for Longhorn Army Ammunition Plant*, Karnack, Texas, June 1995.

Ingold, J., 1994, *The Birds of Caddo Lake Drainage System, Texas-Louisiana: A Survey of Museum Holdings and a Bibliography*, Louisiana State University, Shreveport (as cited in CLI 1995).

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Metzler, D., 1994, *Field Checklist of Birds of Caddo Lake, Including Caddo Lake State Park and Wildlife Management Area, Longview, Texas* (as cited in CLI 1995).

Weston (Roy F. Weston, Inc.), 1998, *Final Group 2 Baseline Risk Assessment Work Plan, Longhorn Army Ammunition Plant, Karnack, Texas*, September 1998.

[a] Based on data from Ingold (1994) and Metzler (1994)

[b] Based on on-site observations by Brantley (LHAAP 1993)

[c] Based on USFWS comments on the Draft Final Step 3 Report for the Installation-Wide Ecological Risk Assessment

LHAAP Longhorn Army Ammunition Plant

Table 4-4
Amphibians Present or Potentially Present at LHAAP

Common Name	Scientific Name	Potentially Present[a]	Confirmed Presence[b]
Three-toed Amphiuma	*Amphiuma tridactylum*	√	
Lesser Siren	*Siren intermedia*	√	
Gulf Coast Water Dog	*Necturus beyeri*	√	
Newt	*Notophthalmus viridescens*	√	
Spotted Salamander	*Ambystoma maculatum*		√
Marbled Salamander	*Ambystoma opacum*	√	
Mole Salamander	*Ambystoma talpoideum*	√	
Smallmouth Salamander	*Ambystoma texanum*	√	
Tiger Salamander	*Ambystoma tigrinum*	√	
Dusky Salamander	*Desmognathus auriculatus*	√	
Dwarf Salamander	*Eurycea quadridigitata*		√[c]
Slimy Salamander	*Plethodon glutinosus*	√	
Eastern Spadefoot	*Scaphiopus holbrooki*	√	
American Toad	*Bufo americanus*		√
Woodhouse's Toad	*Bufo woodhousei*	√	
Gulf Coast Toad	*Bufo valliceps*	√	
Eastern Narrowmouth Toad	*Gastrophryne carolinensis*		√[c]
Great Plains Narrowmouth Toad	*Gastrophryne olivacea*	√	
Northern Cricket Frog	*Acris crepitans*	√	
Cope's Gray Treefrog	*Hyla chrysoscelis*	√	
Green Treefrog	*Hyla cinerea*		√[c]
Squirrel Treefrog	*Hyla squirella*	√	
Spring Peeper	*Hyla crucifer*	√	
Strecker's Chorus Frog	*Pseudacris streckeri*	√	
Northern Chorus Frog	*Pseudacris triseriata*	√	
Spotted Chorus Frog	*Pseudacris clarki*	√	
Bullfrog	*Rana catesbeiana*		√
Green Frog	*Rana melanota*	√	
Bronze Frog	*Rana clamitans*		√
Pickerel Frog	*Rana palustris*	√	
Southern Leopard Frog	*Rana sphenocephala*		√[c]
Pig Frog	*Rana grylio*	√	

Brantley, T., 1995, Personal communication, Forestry consultant, White Oak, Texas (as cited in CLI 1995).

Campo, J., 1986, *The Big Cypress Wildlife Unit: A Characterization of Habitat and Wildlife* , F.A. Series No. 25, Texas Parks and Wildlife Department, Austin, Texas (as cited in CLI 1995).

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Dixon, J.R., 1987, *Amphibians and Reptiles of Texas,* Texas A&M University Press: College Station, Texas (as cited in CLI 1995).

Hardy, L., 1994, *The Amphibians and Reptiles of Caddo Lake Drainage System, Texas-Louisiana: A Survey of Museum Holdings and a Bibliography* , Louisiana State University, Shreveport (as cited in CLI 1995).

Weston (Roy F. Weston, Inc.), 1998, *Final Group 2 Baseline Risk Assessment Work Plan* , *Longhorn Army Ammunition Plant, Karnack, Texas* , September 1998.

[a] Based on data from Hardy (1994), Dixon (1987) and Campo (1986).

[b] Based on on-site observations by Brantley (1995).

[c] Based on USFWS comments on the Draft Final Step 3 Report for the Installation-Wide Ecological Risk Assessment

LHAAP Longhorn Army Ammunition Plant

Table 4-5
Reptiles Present or Potentially Present at LHAAP

Common Name	Scientific Name	Potentially Present[a]	Confirmed Presence[b]
Common Snapping Turtle	*Chelydra serpentina*		√
Alligator Snapping Turtle	*Macroclemys temmincki*		√
Yellow Mud Turtle	*Kinosternon flavescens*	√	
Eastern Mud Turtle	*Kinosternon subrubrum*	√	
Razorback Musk Turtle	*Sternotherus carinatus*	√	
Stinkpot	*Sternotherus odoratus*		√
Cooter	*Pseudomys floridana*	√	
Painted Turtle	*Chrysemys picta*	√	
Slider	*Trachemys scripta*		√[c]
River Cooter	*Pseudemys concinna*	√	
Chicken Turtle	*Deirochelys reticularia*	√	
Mississippi Map Turtle	*Graptemys kohni*	√	
False Map Turtle	*Graptemys pseudogeographica*	√	
Eastern Box Turtle	*Terrapene carolina*		√
Western Box Turtle	*Terrapene ornata*	√	
3-Toed Box Turtle	*Terrapene carolina triunguis*		√[c]
Smooth Softshell	*Trionyx muticus*		√
Spiny Softshell	*Trionyx spiniferus*	√	
Mediterranean Gecko	*Hemidactylus turcicus*	√	
Green Anole	*Anolis carolinensis*	√	
Eastern Fence Lizard	*Sceloporus undulatus*	√	
Texas Spiny Lizard	*Sceloporus olivaceus*	√	
Texas Horned Lizard	*Phrynosoma cornutum*	√	
Coal Skink	*Eumeces anthracinus*	√	
Five-lined Skink	*Eumeces fasciatus*	√	
Prairie Skink	*Eumeces septentrionalis*	√	
Broadhead Skink	*Eumeces laticeps*	√	
Ground Skink	*Scincella lateralis*	√	
Six-lined Racerunner	*Cnemidophorus sexineatus*	√	
Texas Spotted Whiptail	*Cnemidophorus gularis*		√
Slender Glass Lizard	*Ophisaurus attenuatus*		√
Scarlet Snake	*Cemophora coccinea*	√	
Racer	*Coluber constrictor*		√
Eastern Rinkneck Snake	*Diadophis pucntatus*	√	
Rat Snake	*Elaphe obsolete*		√
Mud Snake	*farancia abacura*	√	
Eastern Hognose Snake	*Heterodon platyrhinos*		√
Prairie Kingsnake	*Lampropeltis calligaster*	√	
Common Kingsnake	*Lampropeltis getulus*		√
Milk Snake	*Lampropeltis triangulum*		√
Eastern Coachwhip	*Masticophis flagellum*		√
Green Water Snake	*Nerodia cyclopion*	√	
Plain-bellied Water Snake	*Nerodia erythrogaster*		√
Broad-banded Water Snake	*Nerodia fasciata*		√
Diamond-backed Water Snake	*Nerodia rhombifera*		√
Rough Green Snake	*Opheodrys aestivus*		√
Gulf (Glossy) Crayfish Snake	*Regina rigida*	√	

Table 4-5
Reptiles Present or Potentially Present at LHAAP

Common Name	Scientific Name	Potentially Present[a]	Confirmed Presence[b]
Graham's Crayfish Snake	*Regina grahami*	√	
Brown Snake	*Storeria dekayi*	√	
Red-Bellied Snake	*Storeia occipitomaculata*	√	
Flat-headed Snake	*Tantilla gracillis*	√	
Western Ribbon Snake	*Thamnophis proximus*		√
Rough Earth Snake	*Virginia striatula*	√	
Lined Snake	*Tropidoclonion lineatum*	√	
Coral Snake	*Micrurus fulvius*		√
Southern Copperhead	*Agkistrodon contortrix*		√
Cottonmouth	*Agkistrodon piscivorus*		√
Pygmy Rattlesnake	*Sistrurus miliarius*	√	
Timber Rattlesnake	*Crotalus horridus*		√
American Alligator	*Alligator mississippiensis*		√

Campo, J., 1986, *The Big Cypress Wildlife Unit: A Characterization of Habitat and Wildlife* , F.A. Series No. 25, Texas Parks and Wildlife Department, Austin, Texas (as cited in CLI 1995).

CLI (Caddo Lake Institute), 1995, *Initial Species Inventory for Longhorn Army Ammunition Plant* , Karnack, Texas, June 1995.

Dixon, J.R., 1987, *Amphibians and Reptiles of Texas,* Texas A&M University Press: College Station, Texas (as cited in CLI 1995).

Hardy, L., 1994, *The Amphibians and Reptiles of Caddo Lake Drainage System, Texas-Louisiana: A Survey of Museum Holdings and a Bibliography* , Louisiana State University, Shreveport (as cited in CLI 1995).

Longhorn Army Ammunition Plant, 1993, *Natural Resources Management 5-Year Plan, 1993-1997* .

Weston (Roy F. Weston, Inc.), 1998, *Final Group 2 Baseline Risk Assessment Work Plan, Longhorn Army Ammunition Plant, Karnack, Texas* , September 1998.

[a] Based on data from Hardy (1994), Dixon (1987), and Campo (1986).
[b] Based on on-site observations by Brantley (LHAAP 1993).
[c] Based on USFWS comments on the Draft Final Step 3 Report for the Installation-Wide Ecological Risk Assessment
LHAAP Longhorn Army Ammunition Plant

Table 4-6
Characterization of Measurement Receptors[a]

Common Name	Scientific Name	Habitat[b]	Taxonomic Group; Trophic Level	Diet Composition[b]	Home Range (hectare or km)[b]
Aquatic Species					
Belted Kingfisher	*Ceryle alcyon*	Rivers, streams, lakes, ponds, estuaries. Nests within steep banks (EPA 1993)[b]	Aquatic bird; piscivore	*Fish:* trout, game fish, forage fish, salmon, sticklebacks, kill fish, suckers, perch, minnows, stonerollers, scalpins; *Invertebrates:* crustacea, insects; amphibians	0.39–2.19 km (mean summer, shoreline) 48–1500 ha
Bank Swallow	*Riparia riparia*	Nests in banks along streams and rivers (Sample et al., 1997)[c]	Bird; insectivore	*Aquatic invertebrates* : dragonflies, caddisflies, water moths, stoneflies *Terrestrial invertebrates:* spiders, beetles, winged ants, flies, bees, wasps, moths	Up to 200 ha
Common Snapping Turtle	*Chelydra serpentina*	Freshwater ponds, lakes, marshes	Reptile; omnivore	*Fish:* minnows, sunfish *Other animals* including insects, crustaceans, earthworms, leeches, frogs, toads, salamanders, snakes, small turtles, birds, and small mammals *Vegetation* : algae, waterweed, pondweed, water lily	0.24–8.9 ha
Common Muskrat	*Ondatra zibethicus*	Creeks, streams, lakes, marshes, ponds, shorelines, builds "houses" and "pushups" but may also burrow in banks of streams (Burt and Grossenheider, 1976)[d]	Mammal; herbivore	*Vegetation* : algae, cattail, bulrush, burreed, pondweed, arrowhead, water lily, rice, millet, grass, corn, seeds	0.048–0.17 ha
River Otter	*Lutra canadensis*	Freshwater/ estuarine environments; ponds, rivers, lakes (EPA, 1993)	Mammal; carnivore	*Fish:* game fish, forage fish, kill fish, suckers, perch, minnows, stonerollers *Aquatic invertebrates* : aquatic insects, freshwater shrimp *Other animals* including crayfish, frogs, and other amphibians	400 ha (Texas/coastal marsh)
Brown Bullhead Catfish	*Ictalurus nebulosus*	Muddy pools, streams, ponds, lakes	Fish; omnivore	*Fish:* small fish (e.g., minnows), Aquatic Plants; *Aquatic invertebrates* : aquatic insects, freshwater shrimp *Other animals:* crustaceans, crayfish	Limited by size of water body
Fathead Minnow	*Pimephales promelas*	Muddy pools, intermittent streams, ponds	Fish; herbivore	Aquatic plants	Limited by size of water body

Table 4-6
Characterization of Measurement Receptors[a]

Common Name	Scientific Name	Habitat[b]	Taxonomic Group; Trophic Level	Diet Composition[b]	Home Range (hectare or km)[b]
Terrestrial Species					
Short-Tailed Shrew	*Blarina brevicauda, B. Carolinensis* (Southern Shrew)	Ubiquitous, cool moist conditions, burrowing at depths up to 50 cm (George et al., 1986)[e]	Mammal; insectivore and other invertebrates	Earthworms, annelids; mollusks: slugs, snails; insects; beetles, lepidoptera, centipedes, chilopods; arachnids; crustacea	0.03–1.8 ha
American Woodcock	*Scolopax minor*	Woodlands, abandoned fields, bottomland hardwood forests	Bird; insectivore	Earthworms, other terrestrial invertebrates; plants	0.3-171 ha
Deer Mouse	*Peromyscus maniculatus*	Woodland brushy fields Burrows in soil up to 50 cm deep (Reynolds & Wakkinem, 1987)[f]	Mammal; herbivore	*Vegetation* : nuts, seeds, fruit, fungus, soybeans, forbs, grasses, sedges, shrubs, corn; *Insects* : arthropods, Lepidoptera, beetles, Coleoptera, Hemiptera, spiders	0.014–0.128 ha
Raccoon	*Procyon lotor*	Hardwood swamps, floodplain forests, marshes Although tree dams are preferred, burrows of other animals are also used (EPA, 1993)	Mammal; omnivore	*Vegetation* : acorns, corn, pokeberry, persimmon, grape, hawthorn, holly, mulberry, beautyberry *Animal* : crayfish, snails, insects, fish, small mammals, snakes, frogs,	5.3–814 ha
Red Fox	*Vulpes vulpes*	Ubiquitous. Den chambers are typically constructed in the sides of hills a few feet below the surface (EPA, 1993)	Mammal; omnivore	Small mammals (mice, rabbits, voles), birds (quail, pheasant, grouse), insects as well as seeds, berries, fruit and nuts	100–2000 ha
Townsend's Big-Eared Bat	*Corynorhinus townsendii*	Mesic habitats, coniferous and mixed forests. Roosts in caves, tree cavities, abandoned buildings.	Mammal; insectivore	Nearly 100% moths	530-34,600 ha
Red-tailed Hawk	*Buteo jamaicensis*	Woodlands, wetlands, old fields, pastures.	Mammal; carnivore	Small mammals (mice, shrews, voles, rabbits, squirrels) as well as fish, birds, lizards, snakes, and large insects.	381-989 ha
Terrestrial Plants	---	Terrestrial environments	Primary producer	Nutrients, sunlight	---
Terrestrial Invertebrates	---	Terrestrial environments	Primary consumer	Soil organic matter, etc.	< 0.1 ha

Notes:

[a] Measurement receptor for installation-wide ERA.

[b] EPA 1993, *Wildlife Exposure Factors Handbook,* EPA/600/R-93/187a, Sample and Suter 1994.

[c] Sample, et al., 1997.

[d] Burt, W.H. and Grossenheider, R.P., 1976, *A Field Guide to the Mammals of America North of Mexico* , Third Edition, Houghton Mifflin Co., Boston, MA.

[e] George, S.B., Choate, J.R., and Genoways, H.H, 1986, "*Blarina brevicauda* ", American Society of Mammalogists, Mammalian Species, 261.

[f] Reynolds, T.D. and Wakkinen, W.L., 1987, "Characteristics of the burrows of four species of rodents in undisturbed soils in Southeastern Idaho", American Midland Naturalist, 118, 245-250.

EPA U.S. Environmental Protection Agency
ERA ecological risk assessment
ha hectare
km kilometer
LHAAP Longhorn Army Ammunition Plant

Table 4-7
Comparison of Modeled Concentrations in Surface Water to Ecological Screening Concentrations

Discharge Source and Potentially Affected Stream	Mixing Concentration [a] (mg/L)	Surface Water Screening Concentration [b] (mg/L)	Mixing Concentration Exceeds Screening Concentration?
Goose Prairie Creek			
Discharged from Groundwater, LHAAP-04			
Perchlorate (10-year continuous source)	0.000475	0.40	No
Perchlorate (100-year continuous source)	0.00355	0.40	No
Discharged from Groundwater, LHAAP-35A			
1,1-Dichloroethene	NA [c]	1.5	NA
Trichloroethene	NA [c]	0.55	NA
Tetrachloroethene	NA [c]	NA [d]	NA
RDX	NA [c]	0.18	NA
Perchlorate	0.0000037	0.40	No
Discharged from Groundwater, LHAAP-35B			
1,1-Dichloroethene	NA [c]	1.5	NA
Trichloroethene	NA [c]	0.55	NA
Tetrachloroethene	NA [c]	NA [d]	NA
Discharged from Groundwater, LHAAP-46			
Perchlorate	NA [c]	0.40	NA
Discharged from Groundwater, LHAAP-47			
Trichloroethene	NA [c]	0.55	NA
Tetrachloroethene	NA [c]	NA [d]	NA
Vinyl Chloride	0.0000019	2.82	No
Pentachlorophenol	NA [c]	NA [d]	NA
Perchlorate	0.0028	0.40	No
Discharged from Groundwater, LHAAP-50			
Trichloroethene	0.000007	0.55	No
Tetrachloroethene	NA [c]	NA [d]	NA
Vinyl Chloride	0.000000067	2.82	No
1,2-Dichloroethane	NA [c]	6.3	NA
Perchlorate	0.000224	0.40	No
Central Creek			
Discharged from Groundwater, LHAAP-12 [e]			
Perchlorate	0.000038	0.40	No
Trichloroethene	0.00003	0.55	No
Discharged from Groundwater, LHAAP-29			
1,2-Dichloroethane	NA [c]	6.3	NA
Trichloroethene	NA [c]	0.55	NA
Methylene Chloride	NA [c]	11	NA
Perchlorate	0.00323	0.40	No
Discharged from Groundwater, LHAAP-35C			
Trichloroethene	0.00000079	0.55	No
Discharged from Groundwater, LHAAP-48			
Trichloroethene	0.00000018	0.55	No
Perchlorate	0.0000013	0.40	No
Discharged from Groundwater, LHAAP-67			
1,1-Dichloroethene	NA [c]	1.5	NA
1,2-Dichloroethane	0.000042	6.3	No
1,1,1 - Trichloroethane	0.001459	2.45	NA
1,1,2 - Trichloroethane	0.000144	0.90	NA
Trichloroethene	0.000036	0.55	No
Harrison Bayou			
Trichloroethene	0.000000042	0.55	No

Notes:

[a] From Shaw, 2004, *Draft Modeling Report Derivation of Soil and Groundwater Concentrations Protective of Surface Water and Sediment*, Longhorn Army Ammunition Plant, Karnack Texas, October. The mixing concentration represents the concentration in the surface water body after future modeled groundwater interfaces with the stream.

[b] See Table 6-15 or, if not avalable on this table, TCEQ (2005)

[c] A mixing concentration was not provided in the Shaw, 2004 modeling report.

[d] A screening value was not developed because the chemical was not detected in surface water and was not assessed in the Shaw (2004) modeling report.

[e] Values calculated using a Domenico equation.

NA not applicable

Table 4-8
Preliminary Potential Ecological Exposure Pathway

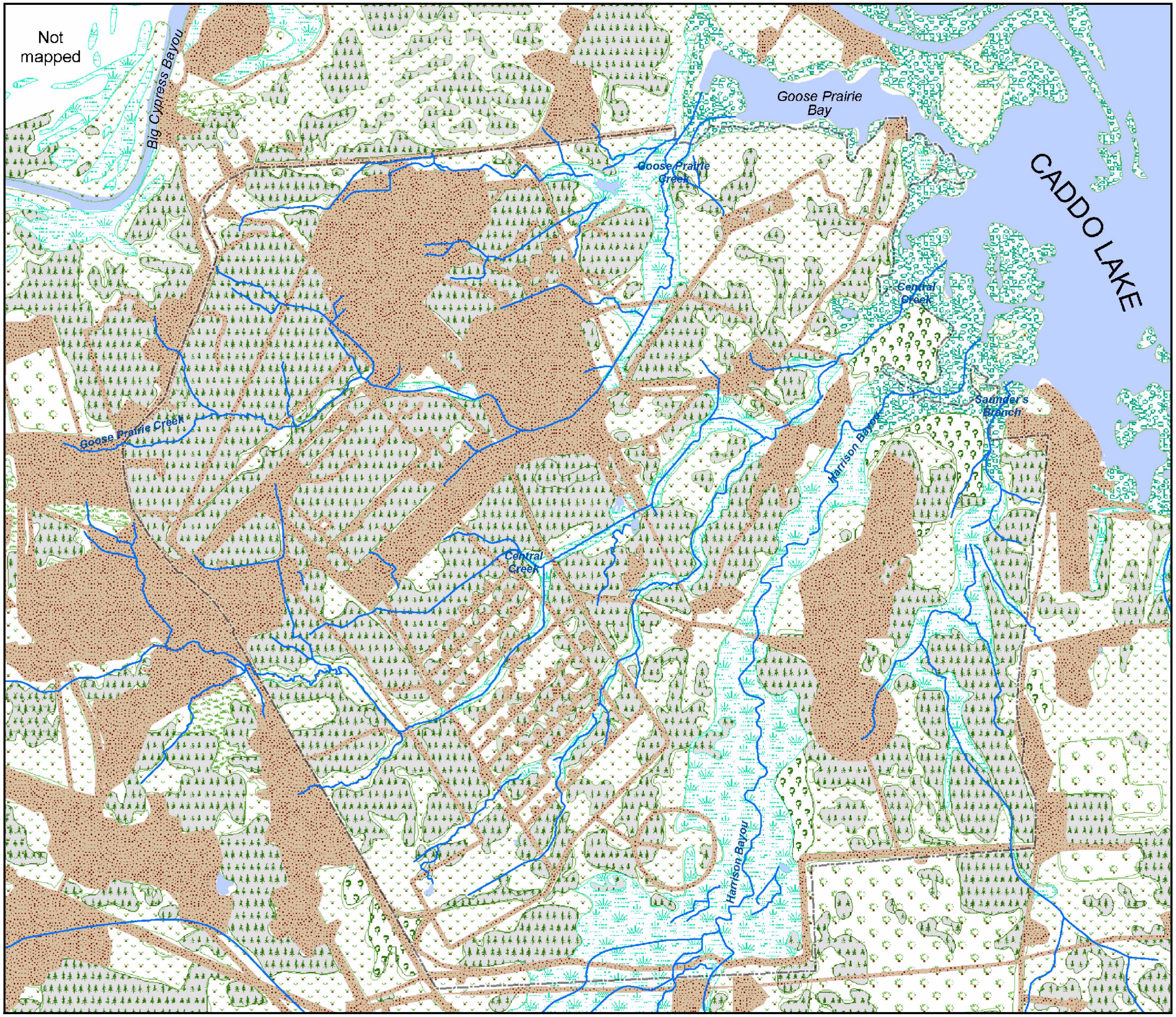
Affected Media	Release Mechanisms	Transport Media	Exposure Points	Exposure Media/ Exposure Routes	Potential Receptors
Soil	None	Soil	At source areas	Soil ingestion, dermal absorption[a], plant uptake	Terrestrial wildlife, vegetation
Soil	Mechanical erosion	Air, stormwater	Waterways near source areas	Sediment and surface water ingestion, dermal absorption[a], direct contact[a], plant uptake, animal uptake	Terrestrial and aquatic wildlife
Soil	Wind erosion, mechanical erosion	Air, dust	At source areas and downwind	Inhalation of dusts[a], ingestion of dusts deposited on above ground plant parts, foliar uptake	Terrestrial wildlife, vegetation
Soil	Plant uptake	Vegetation	At source areas	Ingestion of plants	Terrestrial and aquatic wildlife
Soil	Animal uptake	Animal tissues	At source areas	Ingestion of animal tissues	Terrestrial and aquatic wildlife
Plants/ Vegetation	Animal uptake	Animal tissues	At source areas	Ingestion of animal tissues	Terrestrial and aquatic wildlife
Fish and Wildlife	Animal uptake	Prey	At source areas and installation-wide	Ingestion of prey	Terrestrial and aquatic wildlife
Groundwater	None	Groundwater to surface water	Point of discharge to surface water and downstream	Ingestion of surface water, dermal absorption[a], direct contact[a]	Terrestrial and aquatic wildlife
Groundwater	None	Groundwater to sediment	Point of discharge to sediment	Ingestion, dermal absorption[a], direct contact[a], plant uptake, animal uptake	Terrestrial and aquatic wildlife
Surface water	None	Surface water	Waterways	Ingestion, dermal absorption[a], direct contact[a], plant uptake, animal uptake	Terrestrial and aquatic wildlife
Surface water	Plant uptake	Vegetation	Waterways	Ingestion of plants	Terrestrial and aquatic wildlife
Surface water	Animal uptake	Animal tissues	Waterways	Ingestion of animal tissues	Terrestrial and aquatic wildlife
Sediment	None	Sediment	Waterways	Ingestion, dermal absorption[a], direct contact[a], plant uptake, animal uptake	Terrestrial and aquatic wildlife
Sediment	Plant uptake	Vegetation	Waterways	Ingestion of plants	Terrestrial and aquatic wildlife
Sediment	Animal uptake	Animal tissues	Waterways	Ingestion of animal tissues	Terrestrial and aquatic wildlife

Notes:
[a] Dermal absorption, inhalation of dusts, and direct contact pathways will not be quantitatively evaluated in the installation-wide ERA

LHAAP Longhorn Army Ammunition Plant

00049644

APPROVED BY:	CHECKED BY:	COMPILED BY:	OFFICE:	FILE LOCATION:
P.Srivastav 11/29/04	B.Lu 11/29/04	S.Brown 11/29/04	Houston, TX	seiknxgis00/longhorn/gisworkspace/mxd/4-1_Habitat_zone.mxd



Reference: LHAAP Habitat Map Figure 3-1 (Jacobs)

PLOT DATE: 07/07/03
REVISION FORMAT: 11/29/04

Legend

- Longhorn AAP Boundary
- Streams

Vegetation Zones at LHAAP

(Derived from Infra-Red Aerial Photo Analysis)

- Grassland/Forbland
- Upland Hardwood Forest
- Pine Forest
- Shrubland/Immature Forest/Oldfield
- Wetland/Bottomland Forest
- Cypress Swamp
- Developed Areas
- Mixed Pine/Hardwood Forest some Non-Wetland Bottomland or Moist Mostly Hardwood Forest
- Open Water

N W E S

0 1000 2000 4000 6000

State Plane Feet

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Tulsa District
Tulsa, Oklahoma

Figure 4-1

LHAAP Habitat Map

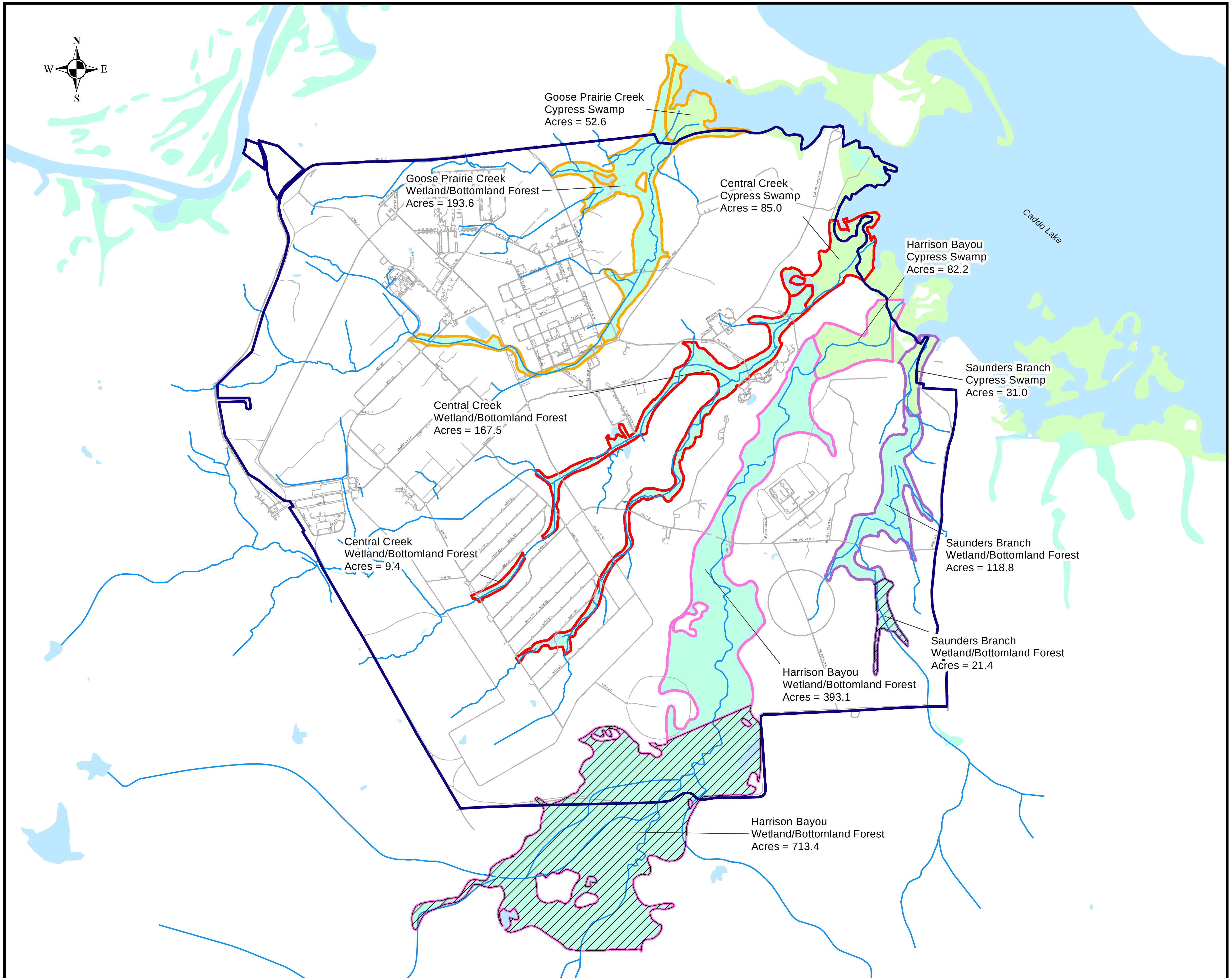
Longhorn Army Ammunition Plant
Karnack, Texas

00049645

Figure 4-2

Aquatic Habitat Areas

Longhorn Army Ammunition Plant
Karnack, Texas



Habitat Summary *

Central Creek = 262 Acres
Goose Prairie Creek = 246 Acres
Harrison Bayou = 475 Acres
Saunders Branch = 150 Acres

* Excluding Background

Legend

Approximate Facility Boundary
Stream

Watershed

Central Creek
Goose Prairie Creek
Harrison Bayou
Saunders Branch

Habitat Zone

Cypress Swamp
Wetland/Bottomland Forest
Water Body
Background**

** (Upgradient from known waste sites)

0 1,500 3,000 Feet

U.S. Army Corps of Engineers
Tulsa District
Tulsa, Oklahoma

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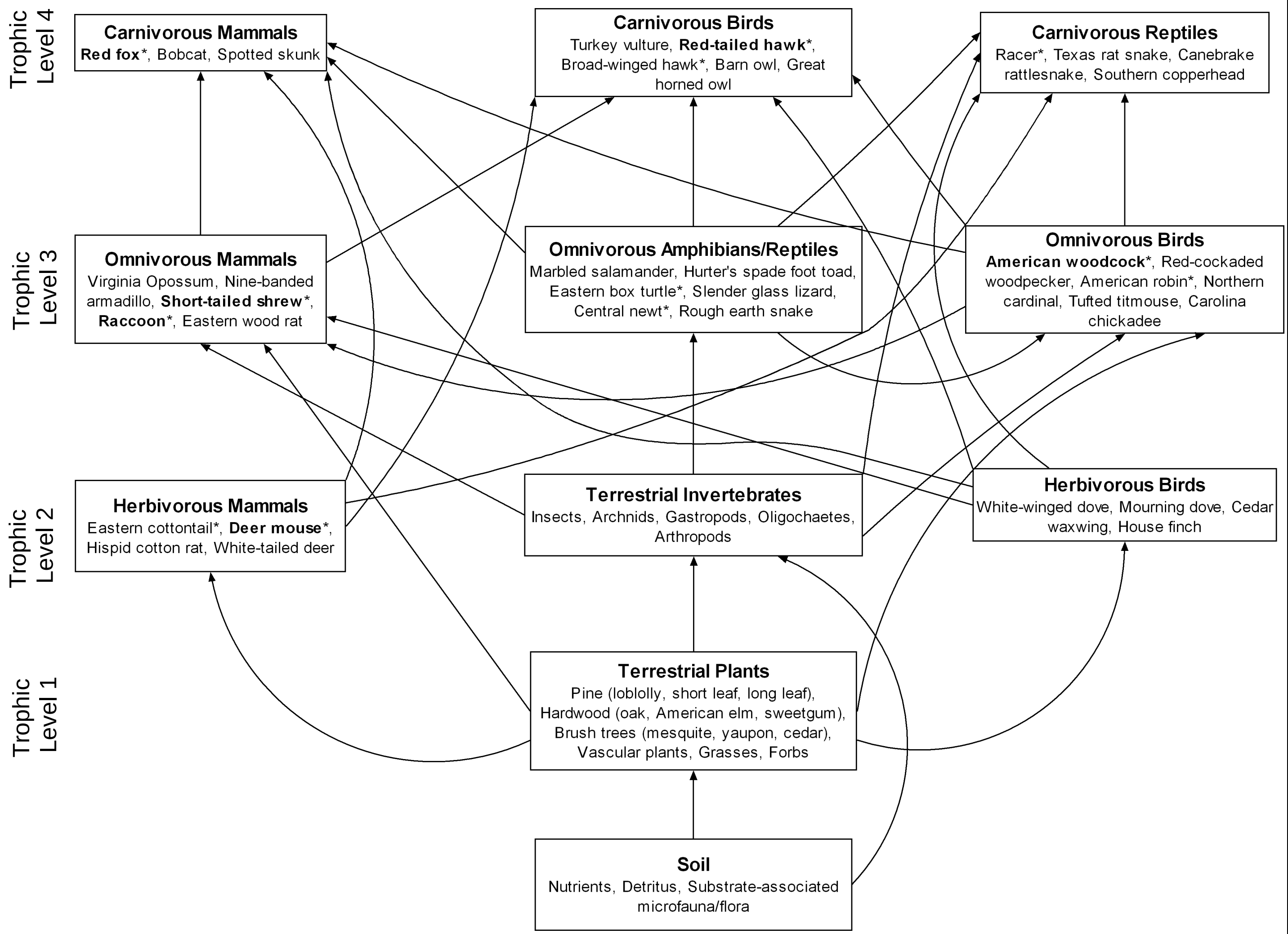
Created Sept 2, 2004 pittor1/longhorn/gisworkspace/masterson/mxd/aquatic_habitat/aquatic_habitat_areas.mxd



Modified from: TNRCC 2001, "*Texas Freshwater/Wetland Food Web*"

Note: Bold indicates selected measurement endpoint

*Receptors with an asterisk are species (or closely related species) found in U.S. EPA's Wildlife Exposure Factors Handbook (1993)

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Tulsa District
Tulsa, Oklahoma

Figure 4-3

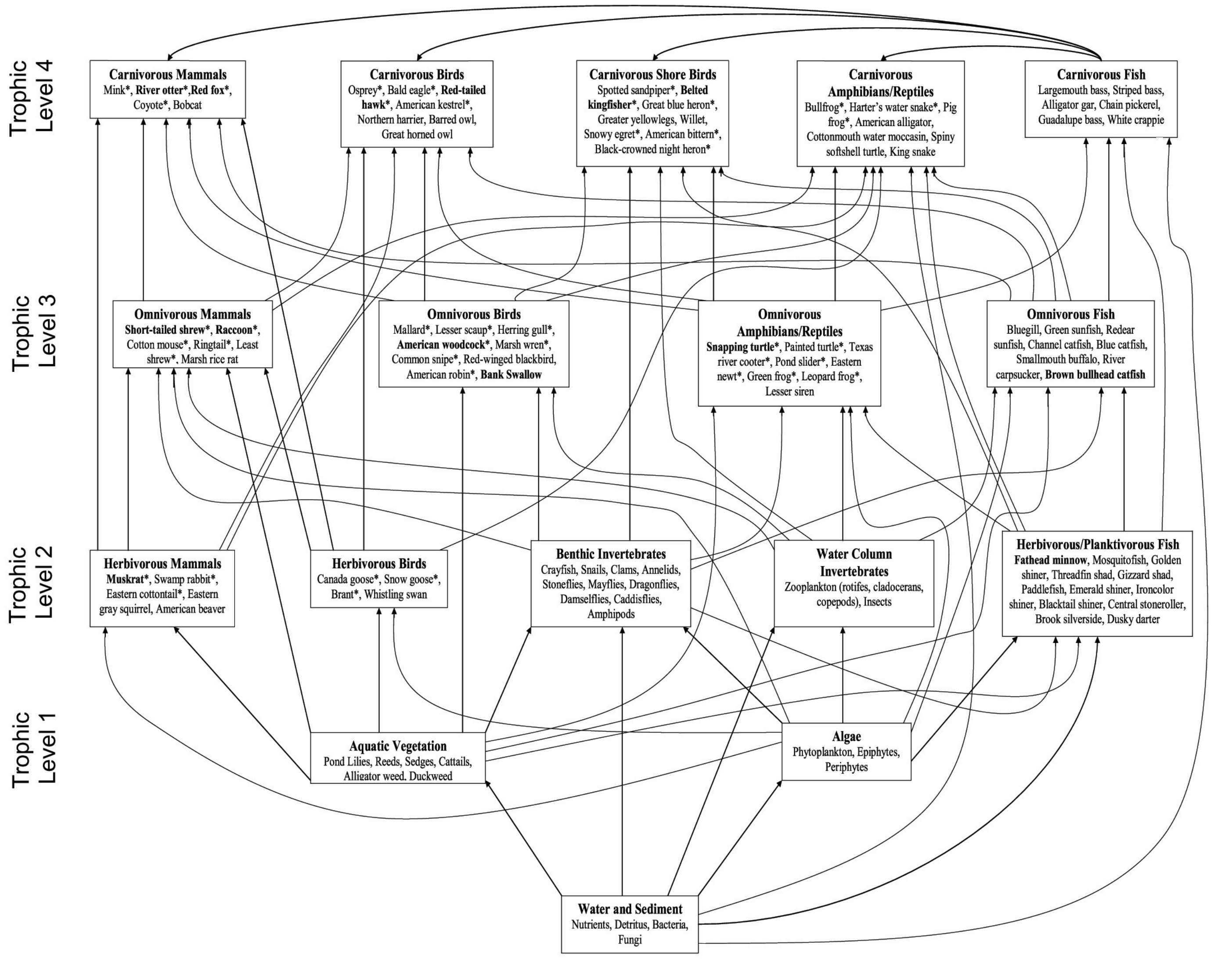
LHAAP Terrestrial Food Web

Longhorn Ammunition Plant
Karnack, Texas

APPROVED BY P.SRIVASTAV 11/27/04
CHECKED BY B.LU 11/27/04
COMPILED BY S.BROWN 11/27/04
OFFICE Houston, TX
FILE LOCATION seiknxgis00/longhorn/gisworkspace/mxd/4-3.mxd

00049647

FILE LOCATION	OFFICE	COMPILED BY		CHECKED BY		APPROVED BY	
seiknxgis00l/longhorn/gisworkspace/mxd/4-3.mxd	Houston, TX	S.BROWN	11/27/04	B.LU	11/27/04	P.SRIVASTAV	11/27/04



Modified from: TNRCC 2001, "*Texas Freshwater/Wetland Food Web*"

Note: **Bold** indicates selected measurement endpoint

*Receptors with an asterisk are species (or closely related species) found in U.S. EPA's Wildlife Exposure Factors Handbook (1993)

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Tulsa District
Tulsa, Oklahoma

Figure 4-4

LHAAP Aquatic Food Web

Longhorn Ammunition Plant
Karnack, Texas

00049648

OFFICE	DRAWN BY		CHECKED BY		APPROVED BY		FILE PATH
Houston, TX	B. Lu	12/04/06	J. Lindberg	12/04/06	K. Everett	12/04/06	T:\GIS\LHAAP\MXD\Step3Eco\FigsFromPP\Fig4-5.mxd

Figure 4-5
Selected Measurement Receptors and Represented Feeding Guilds

Terrestrial Environments

Trophic Level 1	Trophic Level 2	Trophic Level 3	Trophic Level 3	Trophic Level 4
	Herbivore	**Omnivore**	**Insectivore**	**Carnivore**
Plant and Invertebrate Communities	Deer Mouse	Raccoon	Southern Short-tailed Shrew	Red Fox
			American Woodcock	Red-tailed Hawk
			Townsend's Big-Eared Bat	

Aquatic Environments

Trophic Level 1	Trophic Level 2	Trophic Level 3	Trophic Level 3	Trophic Level 4
	Herbivore	**Omnivore**	**Insectivore**	**Carnivore**
Invertebrate Communities	Common Muskrat	Common Snapping Turtle	Bank Swallow	Belted Kingfisher
	Fathead Minnow	Brown Bullhead Catfish		River Otter

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TULSA DISTRICT
TULSA, OKLAHOMA

FIGURE 4-5

SELECTED MEASUREMENT RECEPTORS AND REPRESENTED FEEDING GUILDS

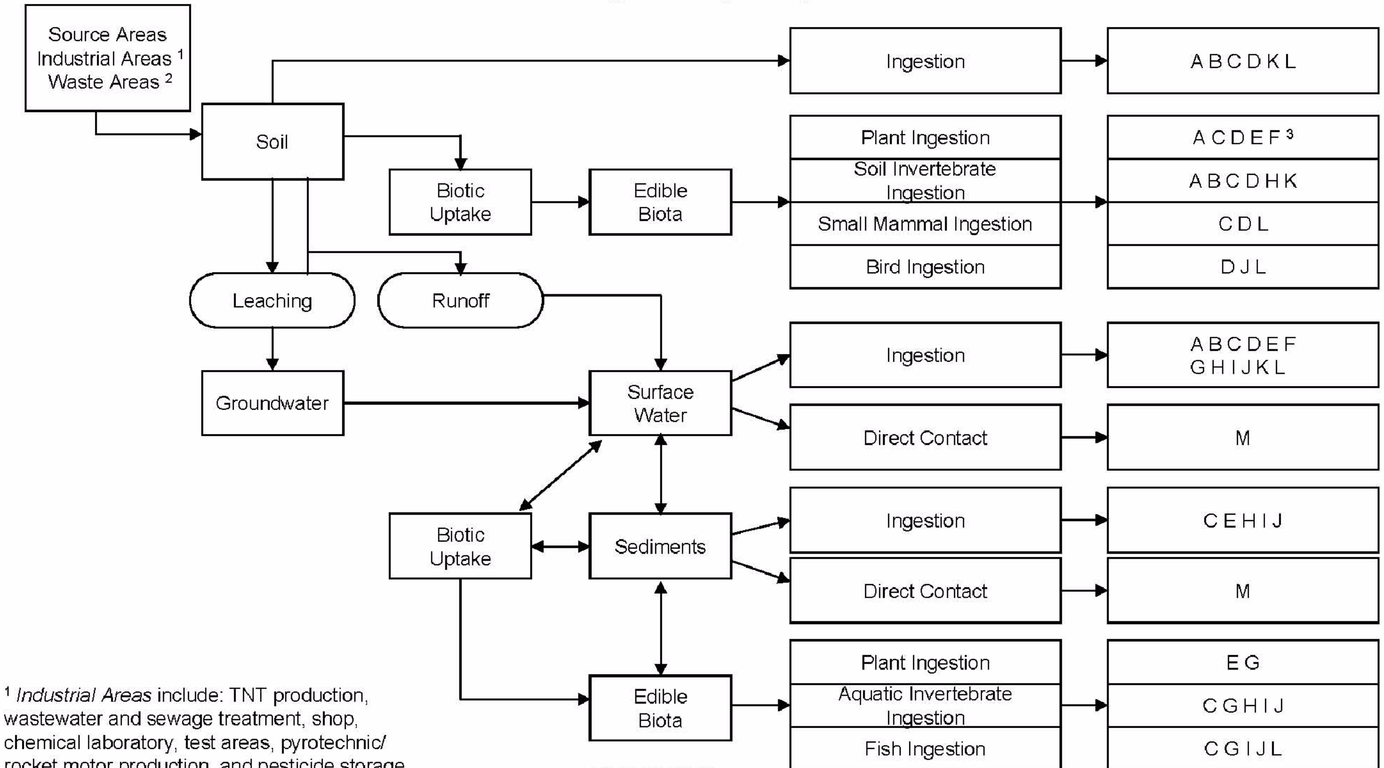
LONGHORN ARMY AMMUNITION PLANT
KARNACK, TEXAS

00049649

OFFICE	DRAWN BY		CHECKED BY		APPROVED BY		FILE PATH
Houston, TX	*B. Lu*	*12/04/06*	*J. Lindberg*	*12/04/06*	*K. Everett*	*12/04/06*	*T:\GIS\LHAAP\MXD\Step3Eco\FigsFromPP\Fig4-6.mxd*

Figure 4-6

Ecological Conceptual Exposure Model



[1] *Industrial Areas* include: TNT production, wastewater and sewage treatment, shop, chemical laboratory, test areas, pyrotechnic/ rocket motor production, and pesticide storage area

[2] *Waste Areas* include: landfills, burning grounds, and waste disposal areas

[3] Although the Bat is assumed to ingest moths, the moths are considered an indirect pathway for ingestion of chemicals in plants, which are the expected food items of the moths.

RECEPTORS

- A. Deer Mouse
- B. Short-tailed Shrew
- C. Raccoon
- D. Red Fox
- E. Muskrat
- F. Townsend's Big-Eared Bat
- G. Common Snapping Turtle
- H. Bank Swallow
- I. Belted Kingfisher
- J. River Otter
- K. American Woodcock
- L. Red-tailed Hawk
- M. Aquatic Life (fathead minnow, brown bullhead catfish, benthic invertebrates)

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TULSA DISTRICT
TULSA, OKLAHOMA

FIGURE 4-6

ECOLOGICAL CONCEPTUAL EXPOSURE MODEL

LONGHORN ARMY AMMUNITION PLANT
KARNACK, TEXAS

5.0 Ecological Endpoints Identification

Ecological endpoints are identified within the ERA process to provide a basis for characterizing risks to the environment. Ecological endpoints are the types of actual or potential impacts a chemical or other environmental stressor has on an ecological component (typically a key receptor). There are two categories of ecological endpoints:

- Assessment endpoints — Explicit expressions of the environmental entities or values that are to be protected (USEPA, 1992a, 2003a).
- Measurement endpoints — Measurable responses related to the valued characteristics chosen as assessment endpoints (USEPA, 1992a).

ERAs typically address both assessment and measurement endpoints. Assessment endpoints are the ultimate focus in risk characterization and the link to the risk management process (USEPA, 1992a, 2003a). Assessment endpoints most often describe the environmental effects that drive decision-making, such as reduction of key populations or disruption of biological community structure (USEPA, 1989a). Although important to ecosystem function, lower trophic-level organisms such as fungi, bacteria, and species of invertebrates are typically not identified as appropriate assessment endpoints (USEPA, 2003a). Rather, assessment endpoints generally focus on the protection of the viability and presence of more mobile and wide-ranging receptors (TNRCC, 2001).

Selected assessment endpoints should focus on identifiable adverse impacts that may affect exposed receptors at the population level. Such impacts include death, impaired growth, or reproductive impairment. Appropriate measurement endpoints should also focus on determining which pathways may be complete for site COPECs and receptors.

When possible, measurement receptors and endpoints are concurrently selected by identifying those that are known to be adversely affected by chemicals at the site, based on published literature. COPECs for those receptors and endpoints are identified by drawing on the scientific literature to obtain information on potential toxic effects of site chemicals to site species. This process ensures that a conservative approach is taken to selecting endpoints and evaluating receptors that are likely to be adversely affected by the potentially most toxic chemicals at the site. Measurement receptors selected for the site were presented in **Section 4.2**.

5.1 Assessment Endpoints

Most ecological assessment methods focus on population measures as endpoints, since population responses are better defined and predictable than are community and ecosystem responses. The latter responses are often more difficult to measure and interpret, highly variable, and not diagnostic of actual exposure. Population measures can also be used to infer changes at the community or ecosystem level. Where the population is protected but individuals are important to the overall sustained success of the population (such as T&E species), then assessment endpoints focus on adverse effects at the individual level.

The selection of appropriate assessment endpoints for use in ERA is a subjective and complex process that requires input from various stakeholders. Guidance from the 1990s suggests that protection of receptors at the base of the food chain may be appropriate; however, as the regulatory field has evolved on this subject, more recent programmatic and regulatory guidance suggests that protection of receptors at the base of the food chain is more important for protection of higher order consumers rather than for protection of the lower trophic level organisms themselves (U.S. Army Biological Technical Assistance Group, 2002; TCEQ, 2001). However, at the request of stakeholders and to move the Step3/BERA project forward, the Army has agreed in this site-specific case to select organisms at the base of the food chain as measurement receptors (see the in-text table below). The inclusion of plants and earthworms as measurement receptors is done solely to provide required information at LHAAP; further characterization or refinement of potential hazards to plants and earthworms will not be conducted in the BERA, and remediation decisions will not be made based on the outcome of the evaluation of these receptors.

Assessment endpoints were identified by drawing on the scientific literature to obtain information on the potential adverse effects of site conditions to populations, communities, and ecosystem levels of biological organization. Valued ecological resources such as fish, birds, and mammal populations, and federal and state T&E species were selected as the focus of the assessment endpoints and are represented by measurement receptors. In addition to the assessment endpoints presented in the *Work Plan for the Installation-Wide Ecological Risk Assessment* (Jacobs, 2003b) and those discussed previously, additional assessment endpoints were included in the Step 3 evaluation to address regulatory concerns regarding protection of the base of the food chain. These additional assessment endpoints included the following:

Assessment Endpoint	Measurement Receptors (or Entity)
• Preservation of the viability of upper trophic level receptors utilizing the plant community as habitat, food source, and/or energy transfer. • Protection of terrestrial plant populations.	• Terrestrial plant community.
• Preservation of the viability of upper trophic level receptors utilizing the invertebrate community as habitat, food source, and/or energy transfer. • Protection of terrestrial invertebrate populations.	• Terrestrial invertebrate community.

Assessment Endpoint	Measurement Receptors (or Entity)
• Protection of populations of aquatic biota	• Fish as represented by the fathead minnow and the catfish, water column invertebrates as represented by cladocerans (water fleas), and benthic invertebrates as represented by amphipods. Also, please see **Section 4.2**, which discusses the fathead minnow being selected as a measurement receptor to represent the State T&E species (the bluehead shiner).

The assessment endpoints selected for LHAAP are listed in **Table 5-1**.

5.2 Measurement Endpoints

When assessment endpoints cannot be measured directly, measurement endpoints are selected. Measurement endpoints are used to approximate, represent, or lead to the assessment endpoint (USEPA, 1989a). Measurement endpoints for LHAAP were selected to provide insights related to the specific assessment endpoint. Toxicity reference values (i.e., NOAELs, which were used in Step 3 and lowest-observed adverse-effect levels (LOAELs), which were used in Steps 4 through 8) obtained from the scientific literature were used as toxicological endpoints (or surrogate measurement endpoints) for the purpose of risk characterization. Measurement endpoints as they relate to assessment endpoints are presented in **Table 5-1**.

Assessment endpoints for this ecological risk evaluation are defined as any adverse effects on ecological receptors, where receptors may include plant and animal populations, communities, habitats, and sensitive environments. Adverse effects on populations may be inferred from measures related to impaired reproduction, growth, and survival. Adverse effects on communities can be inferred from changes in community structure and function. Adverse effects on habitats can be inferred from changes in composition and characteristics that reduce a habitat's ability to support plant and animal populations and communities.

Measurement receptors for the installation-wide ERA at LHAAP include terrestrial and aquatic plant communities, soil invertebrate communities, aquatic communities, benthic communities, and upper trophic level populations, as described in **Table 5-1**. Measurement endpoints for the lower trophic level communities are based on a comparison of media concentration with benchmarks developed for the protection of each specific endpoint. Measurement endpoints for the upper trophic level populations are based on a comparison of an estimated exposure dose (via ingestion of soil, water, sediment, and/or food, as appropriate) with a TRV, using data for the selected measurement receptor to represent the protected trophic level.

Table 5-1
Step 3 Assessment and Measurement Endpoints

Table 5-1
Step 3 Assessment and Measurement Endpoints

Assessment Endpoints	Measurement Endpoints	Measurement Receptor	Information Provided
Terrestrial Habitats			
Protection of trophic level 2 herbivore populations	Mortality; reproduction, growth as measured by NOAEL and LOAEL based TRVs	Deer Mouse	1). Impacts resulting from direct exposure and indirect exposure via food chains 2). Ecologically based PCLs can be established 3). Further evaluation possible in Step 4. Collection of tissue samples is possible.
Protection of trophic level 3 omnivore populations	Mortality; reproduction, growth as measured by NOAEL and LOAEL based TRVs	Raccoon	1). Impacts resulting from direct exposure and indirect exposure via food chains 2). Ecologically based PCLs can be established 3). Further evaluation possible in Step 4.
Protection of trophic level 3 insectivore populations	Mortality; reproduction, growth as measured by NOAEL and LOAEL based TRVs	Short-Tailed Shrew, American Woodcock, Rafinesque's Big-Eared Bat	1). Impacts resulting from direct exposure and indirect exposure via food chains 2). Ecologically based PCLs can be established 3). Further evaluation possible in Step 4. Collection of tissue samples is possible.
Protection of trophic level 4 carnivore populations	Mortality; reproduction, growth as measured by NOAEL and LOAEL based TRVs	Red Fox, Red-Tailed Hawk	1). Impacts resulting from direct exposure and indirect exposure via food chains 2). Ecologically based PCLs can be established 3). Further evaluation possible in Step 4.
Preservation of the viability of upper trophic level receptors utilizing the plant community as habitat, food source, and/or energy transfer.	Mortality; reproduction, growth as measured by receptor-specific benchmark concentrations	Terrestrial plant community	1). Impacts resulting from direct exposure 2). Further evaluation possible in Step 4.
Protection of terrestrial plant populations.	Same as above.	Same as above.	Impacts resulting from direct exposure.
Preservation of the viability of upper trophic level receptors utilizing the invertebrate community as habitat, food source, and/or energy transfer.	Mortality; reproduction, growth as measured by receptor-specific benchmark concentrations	Terrestrial invertebrate community	1). Impacts resulting from direct exposure 2). Further evaluation possible in Step 4.
Protection of terrestrial invertebrate populations.	Same as above.	Same as above.	Impacts resulting from direct exposure.

Table 5-1
Step 3 Assessment and Measurement Endpoints

Assessment Endpoints	Measurement Endpoints	Measurement Receptor	Information Provided
Aquatic Habitats			
Protection of trophic level 2 herbivore populations	Mortality; reproduction, growth as measured by NOAEL and LOAEL based TRVs	Common Muskrat	1). Impacts resulting from direct exposure and indirect exposure via food chains 2). Ecologically based PCLs can be established 3). Further evaluation possible in Step 4.
Protection of trophic level 3 omnivore populations	Mortality; reproduction, growth as measured by NOAEL and LOAEL based TRVs	Common Snapping Turtle	1). Impacts resulting from direct exposure and indirect exposure via food chains 2). Ecologically based PCLs can be established 3). Further evaluation possible in Step 4.
Protection of trophic level 3 insectivore populations	Mortality; reproduction, growth as measured by NOAEL and LOAEL based TRVs	Bank Swallow	1). Impacts resulting from direct exposure and indirect exposure via food chains 2). Ecologically based PCLs can be established 3). Further evaluation possible in Step 4.
Protection of trophic level 4 carnivore populations	Mortality; reproduction, growth as measured by NOAEL and LOAEL based TRVs	Belted Kingfisher, River Otter	1). Impacts resulting from direct exposure and indirect exposure via food chains 2). Ecologically based PCLs can be established 3). Further evaluation possible in Step 4.
Protection of aquatic biota populations, and preservation of the viability of upper trophic level receptors utilizing the aquatic community as habitat, food source, and/or energy transfer.	Mortality; reproduction, growth as measured by comparison of surface water and sediment COPEC concentrations with water and sediment quality criteria, and comparison of fish tissue concentrations with critical body residues.	Fish as represented by the fathead minnow and the catfish, water column invertebrates as represented by cladocerans (water fleas), and benthic invertebrates as represented by amphipods.	1). Impacts resulting from direct exposure and indirect exposure via body burden evaluation and comparison to critical body residues 2). Ecologically based PCLs can be established 3). Further evaluation possible in Step 4.

Notes:

COPEC constituent of potential ecological concern
LHAAP Longhorn Army Ammunition Plant
LOAEL lowest-observed-adverse-effect level
NOAEL no-observed-adverse-effect level
PCL protective concentration level
TRV toxicity reference value

6.0 Identification of Constituents of Potential Ecological Concern

The summary of COPECs retained through Steps 1 and 2 of the screening ERAs was presented in **Section 2.4**. The screening ERAs for Site 16 and the Group 2 and Group 4 Sites consisted of problem formulation, data analysis, identification of potential ecological receptors, estimates of exposure, evaluation of ecological toxicity, and risk characterization. Screening level ecological risks were characterized for each site by identifying those contaminants that:

- Were detected at concentrations exceeding the benchmark screening levels
- Had no available benchmark for screening
- Were not detected but had a minimum detection limit exceeding an associated benchmark
- Were detected and were on the TCEQ list of bioaccumulative COCs (**Appendix A**)
- Had an HQ greater than 1.0 for one or more indicator species via food chain modeling
- Had an HQ greater than 1.0 for one or more aquatic indicator species in the direct sediment exposure pathway evaluation

Based on the screening evaluations and discussions with the agencies (July 2002 and November 2002 and 2003 meetings), it was agreed that the starting point for Step 3 would be a list of terrestrial and aquatic ecological COPECs based on the first four criteria listed above (Jacobs, 2003b). This list of terrestrial and aquatic COPECs that resulted from the screening BERAs (Jacobs, 2003a, 2002a, and 2001a) is presented in **Table 6-1**. However, because additional data had become available since the screening evaluations were conducted, it was agreed during a meeting held November 3, 2003 in Austin, Texas, that all data would be completely re-screened during the Step 3 evaluation. Thus, the initial COPECs identified during Steps 1 and 2 were not used as the basis for selecting a refined list of COPECs during Step 3.

One of the primary goals of the Step 3 evaluation is to develop a list of final COPECs that may require further investigation or targeted remediation. The first step in compiling a list of final COPECs is to develop a list of preliminary COPECs based on a conservative screening step. This step is equivalent to the screening that was conducted during the screening ERAs (i.e., Steps 1 and 2 of the risk assessment process; see Jacobs, 2002a and 2003a). However, the screening criteria at the Step 3 stage are designed to be slightly less conservative and more realistic, so that only chemicals that may truly represent environmental threats are carried forward for further investigation.

The criteria used to identify preliminary COPECs were refined from the screening evaluations in several ways during the Step 3 process. For each COPEC in each medium, the refinement included one or more of the following:

- Re-evaluation of data used for the purpose of screening
- Consideration of alternative screening benchmarks to supplement the TCEQ values used in the screening ERAs
- Use of 95 percent upper confidence limits (UCLs) as comparison criteria instead of MDCs used in the screening ERAs
- Use of site concentrations based on revised data sets (i.e., surface and subsurface soil data from 0 to 3 feet instead of the 0 to 5 feet depth used in the screening ERAs)
- The use of additional criteria (e.g., frequency of detection; USEPA, 2001b [see **Section 6.2**])

Chemicals that failed the initial Step 3 screening step were identified as “preliminary COPECs”. These preliminary COPECs were then further refined using a direct toxicity evaluation for lower trophic level receptors and a refined food chain model for higher trophic level receptors. The results of these evaluations were then considered along with other lines of evidence (e.g., background concentrations, spatial considerations, uncertainties in the risk assessment, etc.) to refine the list of chemicals and develop a list of final COPECs that require further evaluation and/or remediation (see **Section 10**).

6.1 Data Evaluation

The objectives of this section are to review and summarize the analytical data for each medium sampled at LHAAP and to select the data that are used for the Step 3 evaluation.

6.1.1 Data Sources

Following the recommendation of LHAAP stakeholders, the Army agreed to include all available data available at the time to conduct the LHAAP Step 3 evaluation. Therefore, the samples that were included for use in the Step 3 evaluation consisted of a combination of data that were collected at various times in the history of the LHAAP investigation. These data sets included biased samples collected near areas of known contamination as well as systematic samples that were collected by the USFWS for the purposes of characterizing concentrations in soil at regularly spaced grid nodes across the installation. Although the combination of these multiple data sets likely resulted in increased variability of the data used for the ERA, there is no simple way to eliminate this potential problem. The impact of the variability of the data is discussed in the Uncertainty Section (**Section 8.0**).

Data from the following sources were used for Step 3:

- RI database as reviewed and used for Site 16, Group 2, and Group 4 Baseline Human Health and Screening ERAs.
- Additional perchlorate data collected at LHAAP since the Site 16, Group 2, and Group 4 Risk Assessments were performed.
- Additional soil, surface water, and sediment data collected at LHAAP since the Site 16, Group 2, and Group 4 Risk Assessments were performed.
- Co-located soil and small mammal tissue samples that were used to identify site-specific uptake factors. The collection of these samples was made possible by an independent and separate study that was being performed by the U.S. Army Center for Health Promotion and Preventive Medicine (USACHPPM) at LHAAP at the same time the draft Step 3 Report was being prepared. Thus, the collection and use of these samples was not originally planned for the Step 3 investigation (Jacobs, 2003b).
- Background data for soil, surface water, and sediment collected as part of the installation-Wide Background Study conducted during the fall of 2003 through the spring of 2004.

Samples used in the Step 3 evaluation for soil, surface water, and sediment are listed in **Tables 6-2** through **6-12**, and are summarized as follows:

- 1,111 total soil (i.e. 0-3 feet bgs) samples from the Industrial Sub-Area (**Table 6-2**)
- 184 total soil (i.e. 0-3 feet bgs) samples from the Low Impact Sub-Area (**Table 6-3**)
- 285 total soil (i.e. 0-3 feet bgs) samples from the Waste Sub-Area (**Table 6-4**)
- 240 surface water samples and 76 sediment samples from the Harrison Bayou watershed (**Tables 6-5** and **6-6**)
- 304 surface water samples and 124 sediment samples from the Goose Prairie Creek watershed (**Tables 6-7** and **6-8**)
- 42 surface water samples and 67 sediment samples from the Central Creek watershed (**Tables 6-9** and **6-10**)
- 9 surface water samples and 19 sediment samples from the Saunders Branch watershed (**Tables 6-11** and **6-12**)

Sediment samples that were collected from upland locations were treated as soil samples, and are included in the appropriate soil sample lists described in the previous bullets and in **Tables 6-2** through **6-4**. The discussion describing which sediment samples were determined to be upland samples and treated as soil is presented in **Section 6.1.3.1**.

Surface water samples that were collected from upland locations during wet weather events were deemed inappropriate for use in the ERA (similar to previous screening level ERAs prepared for the installation), and were not used. The uncertainty associated with this approach, and the potential affect of COPECs detected in wet weather samples on potentially exposed receptors such as amphibians is presented in **Section 8.0**. The discussion describing which surface water samples were determined to be wet weather samples is presented in **Section 6.1.3.2**. The sampling locations for the soil, surface water, and sediment samples are provided in **Figures 6-1**, **6-2**, and **6-3**, respectively.

In September 2004, an additional 11 surface water and 22 sediment samples were collected from streams at LHAAP to address potential data gaps. These samples were collected after the identification of COPECs and food chain modeling had already been conducted for this Step 3 evaluation. Therefore, a separate, semi-quantitative evaluation was conducted on these additional data to ensure that concentrations in these additional samples would not affect the Step 3 conclusions. This semi-quantitative evaluation is presented in **Appendix G**.

6.1.2 Data Quality Review

Data that have been collected since the screening ERAs were performed were reviewed to ensure that the additional perchlorate, surface water, sediment, and background data met the same criteria for data quality that was applied to the database used in the screening ERAs.

The data evaluation was conducted in accordance with the TNRCC Consistency Memo (1998) as well as the USEPA's *Guidance for Data Usability in Risk Assessments* (1992b). Evaluation under this guidance involves gathering the analytical data generated during the site investigations and sorting the data by medium, evaluating analytical methods, evaluating the quality of the data with respect to sample quantitation limits, qualifiers, and blanks, and producing a set of data that is appropriate for use in the risk assessment.

Analytical methods were evaluated to determine whether they provide adequate data, including adequate quantitation limits on the appropriate contaminants. A quantitation limit is considered adequate when it is at or below the level of concern (i.e., below background or the applicable ecological benchmark). The laboratory's practical quantitation limit (PQL) (i.e., the reporting limit used for LHAAP data) was compared with the minimum and maximum detection limits for each detected chemical in the three sub-areas and the four watersheds, as appropriate. Because much of the data used in the Step 3 evaluation was historical in nature, it was expected that detection limits for several chemicals would exceed benchmark values. The results of the comparison to detection limits are presented in the Uncertainty Section (**Section 8.0**).

Analytical data were qualified by the laboratory and data validator when quality control acceptance criteria or other evaluation criteria were not met. The review for data usability was performed using standard protocols (i.e., USEPA's *Guidance for Data Usability in Risk Assessments*, *Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*, and *Contract Laboratory Program National Functional Guidelines for Organic Data Review* [USEPA, 1992b, 1994a, 1994b, respectively]). Qualified data are almost always useable as long as they are used appropriately and the uncertainty in the data is discussed. Data with qualifiers that indicate uncertainties in concentration but not in identification were used in Step 3. Data flagged by the laboratory or data validator as unusable (usually "R"-flagged) or blank-related ("B"-flagged) were not used (Jacobs, 2003b).

6.1.3 Data Management

Step 3 involved several data management tasks. The objectives of the data evaluation were reviewed, the analytical data for LHAAP were summarized, and the data that were evaluated for each medium for the purpose of identifying the COPECs associated with each medium were selected.

The data from the previous screening ERAs at LHAAP (e.g., Site 16, Group 2 and Group 4 screening ERA reports) were combined with the results from more recent investigations into one data set for the installation-Wide ERA.

6.1.3.1 Organization of Terrestrial Data

As discussed in **Section 1.3.9**, the Step 3 evaluation was conducted on an installation-wide scale. The terrestrial evaluation was organized around terrestrial sub-areas (i.e., Industrial Sub-Area, Low Impact Sub-Area, and Waste Sub-Area) that were based on known evidence of impact (**Figure 1-5**). The existing terrestrial habitat types are generally similar between all sub-areas (**Figure 4-1**). Terrestrial measurement receptors were evaluated for each sub-area.

Soil data collected from depths ranging between 0 and 5 feet bgs were used in the screening ERAs. For purposes of the Step 3 evaluation, soil data were evaluated based on different depths that more realistically reflect the behavioral activities of the measurement receptors (Jacobs, 2003). "Total soil" was used as the primary soil database that was used to identify preliminary COPECs. A sample was included in the total soil database if at least 50 percent of its sample interval was less than 3 feet. Thus, a soil sample from 2 to 4 feet was included in the total soil database, but a sample from 2 to 5 feet was not.

In accordance with TCEQ guidance (TNRCC, 2001), comments received on the screening ERAs from TCEQ and USEPA, as well as stakeholder input during the ERA scoping meeting held in July 2002 (Jacobs, 2002b), the soil depth for exposure was selected to reflect an appropriate soil depth based on the burrowing habits of the selected measurement receptors. Therefore, for the refined food chain model (**Section 7.2**), soil data were sorted as a function of soil depth for surface (0 to 0.5 feet bgs) and total (0 to 3 feet bgs) soil zones. Typically, the ecological EPC for surface soil (0 to 0.5 feet in depth) was used for most surface dwelling receptors (TNRCC, 2001). For burrowing receptors (i.e., the Short-Tailed Shrew and Red Fox), a 3-foot cut-off for total soil depth (0 to 3 feet in depth) was used based on available life history information regarding the burrowing habits of the selected measurement receptors (see **Table 4-6**).

As discussed previously, and described in greater detail in **Section 6.1.3.2**, sediment data collected from intermittent on-site drainage ditches or upland locations were considered surface soil data for purposes of this evaluation.

In summary, soil samples collected from the following depths were used in the Step 3 evaluation:

- Total soil (approximately 0 to 3 feet bgs): used for initial screening of chemicals to identify preliminary COPECs, and as the database used to derive EPCs for burrowing receptors (i.e., Short-Tailed Shrew and Red Fox). This database also includes upland sediment samples.
- Surface soil (approximately 0 to 0.5 feet bgs): used as the database to derive EPCs for non-burrowing receptors (i.e., all receptors except the Short-Tailed Shrew and Red Fox). This database also includes upland sediment samples.

6.1.3.2 Organization of Aquatic Data

Surface water and sediment data were sorted on a watershed basis. The identified watersheds at LHAAP include Harrison Bayou, Goose Prairie Creek, Central Creek, and Saunders Branch.

Sediment samples from on-site water bodies and from depositional areas from where on-site streams discharge to Caddo Lake were used in the Step 3 evaluation. Only sediment samples up to 1 foot in depth were used. Deeper samples were not used because 1) most organisms would only be exposed to the top 12 inches, 2) sediment samples greater than 1 foot in depth generally consisted of stiff, gray clay that is inhospitable for biological activity, and 3) the highest concentrations detected in sediment were generally located in the shallower samples (Shaw, 2004c).

Only surface water samples collected from on-site water bodies were included in the Step 3 evaluation; any chemical constituents discharging from the creeks into the lake would have significant dilution and would not be representative of the creeks. To identify impacts to Caddo Lake, data from a fish tissue study conducted by the USEPA Region 6 in February 2004 (**Section 2.2.4**; USEPA, 2004) were used to address whether site-related chemicals are accumulating in the aquatic food chain off site.

Some surface water samples were associated with wet weather events. These samples do not reflect true aquatic habitat, are not representative of a medium that would impact aquatic ecological receptors, and were not treated as "surface water" in the ERA. To identify which samples represent aquatic habitat areas and which represent upland areas sampled during wet weather events, the following criteria were used:

- Surface water and/or sediment samples collected from or within 500 feet of (1) Goose Prairie Creek, Central Creek, Harrison Bayou, or Saunders Branch; (2) an identified tributary to these four creeks; or (3) Cypress Swamp or Wetland Bottomland Forest habitat areas assumed to be from true aquatic habitat areas. These samples were included in the Step 3 evaluation.
- Surface water and/or sediment samples collected greater than 500 feet from (1) Goose Prairie Creek, Central Creek, Harrison Bayou, or Saunders Branch; (2) an identified tributary to these four creeks; or (3) Cypress Swamp or Wetland Bottomland Forest habitat areas assumed to be from upland areas during a wet weather event. Surface water samples from these areas were not used in the Step 3 evaluation (Note: for review of these excluded data, see the **Data Report**, provided on compact disk as **Exhibit 1**). Upland sediment samples from these areas were treated as soil samples (see also **Section 6.1.1**).

Five-hundred feet was selected as the point of delineation for wet-weather samples based on an evaluation of the samples and their distance from the creeks and/or wetland areas. In addition, 500 feet represents a conservative uncertainty associated with sample coordinate locations, mapped stream and tributary locations, and mapped wetland boundaries. 500 feet was selected as a conservative distance within which to address surface water data as actual stream samples (true aquatic habitat) rather than wet weather samples. As the designation of a surface water sample as either “wet weather” or “true aquatic habitat” was based on an evaluation of sample locations plotted on a site map in relation to stream and wetland boundaries, the accuracies of any of these locations was deemed to be ± 500 feet, due to potential inaccuracies associated with sample location global positioning system (GPS) coordinates, wetland habitat boundaries, and stream bank boundaries.

Cypress Swamp and Wetland Bottomland Forest habitat data were obtained from an electronic ARC-View copy of the LHAAP Habitat Map (**Figure 4-1**). As noted in **Section 6.1.1**, the uncertainty associated with the approach of not using wet weather surface water samples in the risk assessment, and the potential effect of COPECs in these wet weather samples on ecological receptors such as amphibians, is presented in **Section 8.0**.

6.1.3.3 Data Manipulation

The 95 percent UCL of the mean was calculated for all chemicals with more than five samples. The 95 percent UCL was calculated using the bootstrapping technique. Bootstrapping is a statistical technique where the given set of observations (i.e., data) is re-sampled, with replacement (USEPA, 1997b). When repeated a large number of times, a relatively accurate estimation of the variance of the population may be determined, which allows for the development of confidence limits for a given parameter, such as the mean. Bootstrapping is considered a robust statistical method for calculating the UCL because it does not rely on assumptions on the distribution of the data set. Five-thousand bootstrap replications were completed for each COPEC, and the 95 percent UCL of the mean (or the MDC for chemicals with five or fewer samples) was selected as the exposure concentration for the chemical.

Non-detected concentrations were assigned a value of one-half the reporting limit (i.e., PQL) for the development of general summary statistics. Because the "true" concentration of a non-detected chemical can be anywhere from 0 to the reporting limit, a random number between 0 and the reporting limit was used to calculate the 95 percent UCLs to reflect the variability of the potential concentrations of non-detected chemicals in the medium. Occasionally, the 95 percent UCL was higher than the MDC. This usually occurred when there were a small number of detections at low or estimated (i.e., J-qualified) concentrations, as well as several samples that had elevated reporting limits. In these cases, the 95 percent UCL was influenced primarily by the reporting limits of the non-detected chemicals. When the inclusion of surrogate values for non-detected chemicals causes the calculated exposure concentration to exceed the MDC, it is permissible to eliminate chemicals with elevated detection limits (USEPA, 1989b). For the Step 3 evaluation, if the 95 percent UCL exceeded the MDC due to elevated detection limits, then all samples with non-detected chemicals with detection limits greater than the MDC were eliminated from the dataset and a new mean and 95 percent UCL were calculated using the modified data set. The new mean and 95 percent UCL were then used for screening purposes at the COPEC selection stage, and as the exposure concentrations in the direct contact evaluations and the food chain models for chemicals that were identified as preliminary COPECs (**Section 6.3**).

Field duplicates were averaged with their respective paired site sample prior to inclusion in the statistical calculations.

When multiple analyses by two different analytical methods were available for the same constituent, the highest detected concentration was used in the calculations. If both results from the different analyses were non-detect, the lowest reporting limit was used for purposes of calculating the EPC.

No data were TOC-normalized prior to manipulation and evaluation.

<u>Dioxins and PCBs</u>

Polychlorinated dibenzo-p-dioxins (PCDDs), polychlorinated dibenzofurans (PCDFs) and dioxin-like PCBs have a wide range of relative potencies and are usually found in complex mixtures in the environment. There are 75 possible PCDD congeners and 135 PCDF congeners, and, as with PCBs, their toxicity is dependent on the number and location of chlorine atoms.

To simplify the characterization of ecological effects to dioxins, the use of internationally recognized toxic equivalency factors (TEFs) are used to evaluate their toxicity (Van den Berg et al., 1998). The TEF is an order of magnitude estimate of the toxicity of an individual congener relative to 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). Consequently, the congener concentration multiplied by the TEF equals the toxicity equivalency quotient (TEQ) concentration. It is generally assumed and supported in the literature that effects from different congeners are additive. Therefore, the sum of TEQ concentrations was incorporated into risk calculations.

It should be noted that TEF values are very limited. TEFs were obtained from Van den Berg et al. (1998), which presents TEFs for humans/mammals, fish, and birds. Various classes of organisms exhibit varying toxic responses to some dioxin congeners; for example, fish exhibit very low responses to 1,2,3,7,8,9-HexaCDD compared to mammals and birds (Van den Berg et al. 1998). Only a single TEF value was used for each congener in the calculations of dioxin TEQs. As a conservative approach, the highest TEF value for each congener across the three different classes available (i.e., mammals, fish, and birds) was used for all TEQ calculations. The uncertainties associated with this approach are discussed in **Section 8.0**. Thus, to evaluate dioxins, the individual congeners detected in a given sample were multiplied by the TEFs and then summed to create a 2,3,7,8-TCDD TEQ, which was then evaluated throughout the risk assessment using the screening and toxicity values associated with 2,3,7,8-TCDD. The TEFs used in the Step 3 evaluation are presented in **Table 6-13**.

6.2 Selection of Preliminary Constituents of Potential Ecological Concern

As discussed previously, the complete data sets for all media were subjected to a refined screening process to identify preliminary COPECs, as recommended in USEPA guidance and discussed in detail in *The Role of Screening-Level Risk Assessments and Refining Contaminants of Concern in Baseline Ecological Risk Assessments* (USEPA, 2001b). These preliminary COPECs are chemicals that may pose a threat to ecological receptors, and are carried forward for additional evaluation in this combined Step 3/BERA report (e.g., direct toxicity and food chain model evaluation, as well as subsequent BERA activities). Chemicals not identified as preliminary COPECs are assumed to be present at concentrations that are relatively innocuous to the environment, and are not addressed further.

The following criteria were used to select or exclude chemicals as preliminary COPECs:

- A constituent was excluded as a COPEC for a medium if it was detected at concentrations below the screening benchmark for that medium (except as noted below).

- A constituent was excluded as a COPEC for a medium if it was detected in less than three percent of all samples analyzed in that medium for that constituent. If it was detected in the samples with a frequency between three and five percent, a spatial analysis was performed to determine if there was a potential hot spot. If spatial information suggested the presence of a COPEC hot spot, then the constituent was not excluded based on the "low frequency of detection" criterion. It is noted that the use of a 3 percent criterion for screening out COPECs based on the chemical's frequency of detection contradicts the general practice by the Army at federal facilities, and USACHPPM does not concur with its use at LHAAP. However, the use of the 3- and 5-percent frequency of detection criteria as described above was agreed to as a project-specific compromise with USEPA and TCEQ.

  As recommended in USEPA (2001b), specific issues associated with exclusion of COPECs using the "low frequency of detection" criterion are discussed, including the sampling regime used to collect the data, the role of spatial patterns of detections, and possible temporal influences on concentrations. The issue of the influence of random and/or biased sampling on the frequency and magnitude of detected values within the distribution of data is expected to be of minor importance on the LHAAP data sets, as both random and biased sampling was performed. The issue of the influence of spatial patterns of contaminants (i.e., hot spots) and exclusion of COPECs based on the "low frequency of detection" criterion was addressed using spatial plots, as previously discussed. Finally, because any site-related contamination has been in place for many years, sampling of data has occurred over multiple seasons, and the media of concern (i.e., soil, sediment, and surface water) are not expected to experience significant concentration fluxes at different times of the year, temporal patterns of contamination are not expected to be a significant factor in the COPEC selection process.

- A constituent was excluded as a COPEC for a medium if it was considered an essential nutrient. Essential nutrients for soil included calcium, chloride, magnesium, potassium and sodium. Because sodium and chloride could be present in the dissolved phase in aquatic systems as the result of a site-related release, only calcium, magnesium, and potassium were included as essential nutrients for surface water and sediment.

- A constituent was excluded as a COPEC for the soil medium if it was a VOC, as VOCs are unlikely to persist in soil long enough to be available for uptake by organisms.

- A constituent was retained as a COPEC if no screening value was available (see following subsections for details).

- A constituent was retained as a COPEC if it is on the TCEQ bioaccumulation potential list (TNRCC, 2005; see **Appendix A**) even if it would have been excluded as a COPEC based on the criteria listed previously.

The presence of chemicals in media as natural elements or ubiquitous chemicals (i.e., background) was not used as a criterion for refining the list of COPECs at this point in Step 3; however, comparison with background was conducted at the end of Step 3 and was used to generate a final list of COPECs that require further evaluation (see **Section 10.0**). Preliminary COPECs determined to be background-related are not eliminated entirely from the 8-Step process. Rather, they are retained in a separate list and presented again during Risk Characterization (Step 7) for consideration by risk managers. However, because they are considered naturally occurring and/or environmentally ubiquitous, they are not included as final COPECs, and are not candidates for additional ecological characterization or investigation in the BERA.

A discussion of the ecological benchmarks used in this Step 3 evaluation, including an evaluation of alternate benchmarks (i.e., benchmarks suggested in place of TCEQ benchmarks) and proposed benchmarks (i.e., benchmarks suggested for chemicals that lack TCEQ benchmarks), is presented in greater detail in the following subsections.

6.2.1 Ecological Benchmarks

Conservative ecological screening levels (ESLs), or "benchmarks", were determined for soils, surface water, and sediment. These screening levels were used in developing the list of preliminary COPECs.

6.2.1.1 Soil Benchmarks

The soil COPECs identified through the screening ERAs (Steps 1 and 2; see Jacobs 2002a and 2003a) were selected using only TCEQ soil screening benchmarks (TNRCC, 2000). Federally approved soil screening values (USEPA, 2005) were used as the primary source of soil benchmark values in this Step 3 evaluation, supplemented primarily by a more recent set of soil screening benchmarks (TCEQ, 2005). The benchmarks used for soil in the Step 3 evaluation are presented in **Table 6-14**.

USEPA Ecological Soil Screening Levels (Eco-SSL) (USEPA, 2005) were used as the primary source of soil benchmark values. The Eco-SSLs are risk-based ecological soil screening levels that were derived from the efforts of a multi-stakeholder workgroup and represent concentrations of contaminants in soil that are protective of ecological receptors that commonly come into contact with soil or ingest biota that live in or on soil. The Eco-SSLs were derived using four steps: (1) a literature search; (2) a screen of the identified literature with exclusion and acceptability criteria; (3) a process where the test results were extracted, evaluated, and scored for applicability, and; (4) the derivation of the Eco-SSL. These Eco-SSLs apply to sites where terrestrial receptors may be exposed directly or indirectly to contaminated soil (USEPA, 2005).

Eco-SSLs are only currently available for 12 chemicals. Therefore, many chemicals were detected at LHAAP for which an Eco-SSL did not exist. A literature review was conducted to identify other soil screening benchmarks values. If no Eco-SSL benchmark was available for a detected constituent, the following hierarchy of benchmarks was used to obtain benchmarks for Step 3:

- TCEQ-recommended soil benchmarks (TCEQ, 2005);
- *Preliminary Remediation Goals for Ecological Endpoints* (Efroymson et al. 1997a);
- *USEPA Region 5 Ecological Screening Levels (ESL)* (USEPA, 2003b);
- *Supplemental Guidance to RAGS: Region 4 Bulletins, Ecological Risk Assessment* (USEPA, 2001a);
- Talmage et al. (1999).

The TCEQ-recommended soil benchmarks were used as the main source of supplemental soil benchmarks when Eco-SSL values were not available. The TCEQ soil benchmarks incorporate Eco-SSL values protective of terrestrial plant and earthworms, when available (TCEQ, 2005); for other chemicals, the benchmarks are primarily derived from the lower of the terrestrial plant and earthworm benchmark values from Efroymson et al. (1997b, 1997c).

The Oak Ridge National Laboratory (ORNL) ecological preliminary remediation goals (PRGs) for soil (Efroymson et al., 1997a) are based on toxicological benchmarks for plants and earthworms developed by Efroymson and others (1997b, 1997c), and calculated PRGs for wildlife (Samples et al., 1996). Benchmarks for the three types of organisms (wildlife, plants and soil invertebrates) were compared, and the lowest value available was selected as a conservative screening value. Efroymson et al. (1997b) compared their soil phytotoxicity benchmarks to other ecotoxicological criteria developed by the Canadian Council Ministry for the Environment (CCME) and ecological intervention values developed in the Netherlands. CCME has developed environmental quality criteria (EQC) for contaminated sites, which are "numerical limits for contaminants in soil and water intended to maintain, improve, or protect environmental quality and human health at contaminated sites in general." They represent levels considered generally protective of human health and the environment for specified uses of soil without taking into account site-specific conditions. Efroymson et al. (1997b) looked at EQC developed for the most conservative use of agriculture. They concluded that these criteria are not strictly comparable to their phytotoxicity benchmarks because they also take into account human health and, presumably, soil organisms and the entire food chain dependent upon the soil. In addition, the CCME EQC available for some COPECs are numerically greater than the Efroymson et al. (1997b) soil phytotoxicity benchmarks.

USEPA Region 5 ESLs (USEPA, 2003b) represent protective benchmarks (e.g., water quality criteria, sediment quality guidelines/criteria, and wildlife chronic NOAEL) for 223 contaminants and four environmental media (air, water, sediment, and soil).

USEPA Region 4 benchmarks (USEPA, 2001a) are ecological screening values (ESVs) developed by USEPA Region 4 for use in screening-level ERAs at Army sites. The screening values are comprised of benchmarks from USEPA Region 4 Waste Management Division, as well as supplemental values obtained from other sources.

When no benchmark was available, a benchmark was selected based on an appropriate surrogate chemical. Surrogates were selected using professional judgment based upon similarity of chemical structure, chemical substitutions, and other properties to support the assumption of similar toxicological effects. The following surrogates were used for constituents detected in soil:

- 2-amino-4,6-DNT for 4-amino-4,6-DNT
- 1,2,4,5-tetrachlorobenzene for 1,2,3,4-tetrachlorobenzene
- Chlordane for cis-nonachlor, trans-nonachlor, and oxychlordane
- 4,4- dichlorodiphenyldichloroethane (DDD)/DDE/ dichlorodiphenyltrichloroethane (DDT) for o,p'-DDD/DDE/DDT

If no benchmark was available and no surrogate benchmark could be identified, the constituent was conservatively retained as a COPEC. The Step 3 evaluation includes a discussion of the uncertainty associated with the characterization of ecological impacts of COPECs without benchmarks and adequate toxicity data (**Section 8.0**).

6.2.1.2 Surface Water Benchmarks

The surface water COPECs identified through the screening ERAs (Steps 1 and 2) were selected using only TCEQ ecological benchmarks for water (TNRCC, 2000). A more recent set of surface water benchmarks (TNRCC, 2005) was used for purposes of refining the list of COPECs. The benchmarks used for surface water in the Step 3 evaluation are presented in **Table 6-15**.

The TCEQ-recommended surface water benchmarks were used for all chemicals when available. The TCEQ benchmarks for surface water are primarily the state of Texas Surface Water Quality Standards or in the absence of a state standard, the federal National Ambient Water Quality Criteria (AWQC).

If no TCEQ benchmark or federal AWQC was available for a detected constituent, the following hierarchy of benchmarks was used:

1. The lowest value from the following three sources: USEPA Region 5 ESLs (USEPA, 2003b); PRGs from Efroymson et al. (1997); and Canadian environmental quality guidelines from CCME (CCME, 2002).
2. USEPA Region 4 ecological benchmark screening values for surface water (USEPA, 2001a).
3. Other available screening values from Talmage et al. (1999), and/or Los Alamos National Laboratory (LANL) Ecorisk Data Base (LANL, 2005).

For perchlorate, a benchmark of 9.3 mg/L is recommended in Dean et al. (2004). However, comments from stakeholders dated June 2007 (**Appendix K**) requested a re-evaluation of the perchlorate benchmark using more recent literature information, including potentially more sensitive endpoints (e.g., frog metamorphosis impacts, etc.). This was performed (**Appendix J-1**) and an alternative benchmark of 0.40 mg/L was developed and used.

When no benchmark was available a benchmark was selected based on an appropriate surrogate chemical. The following surrogates were used for constituents detected in surface water:

- 2,4-DNT for 2,6-DNT
- 2-Amino-2,6-DNT for 4-amino-2,6-DNT
- Benzo(b)fluoranthene for benzo(k)fluoranthene

If no benchmark was available, and no surrogate benchmark could be identified, the constituent was conservatively retained as a COPEC. The Step 3 analysis includes a discussion of the uncertainty associated with the characterization of ecological impacts of COPECs without benchmarks and adequate toxicity data (**Section 8.0**).

6.2.1.3 Sediment Benchmarks

The sediment COPECs identified through the screening ERAs (Steps 1 and 2) were selected using only TNRCC ecological benchmarks for sediment (TNRCC, 2000). A more recent set of sediment screening benchmarks (TNRCC, 2005) was used for purposes of refining the list of COPECs. The benchmarks used for sediment in the Step 3 evaluation are presented in **Table 6-16**.

The TCEQ-recommended sediment benchmarks were used for all chemicals when available. The TCEQ benchmarks for sediment were obtained from the threshold effect levels provided in Smith et al. (1996). Other TCEQ sources include the effects range low values in Long and Morgan (1990), lowest effects levels from Persaud et al. (1993), *Interim Sediment Quality Guidelines (ISQG)* (Environment Canada, 1997), and the consensus based TECs from MacDonald et al (2000). It should be noted that that TCEQ threshold effect levels are not necessarily NOAEL-based screening values, but have been adopted as screening levels by the State of Texas as concentrations below which adverse effects are considered extremely unlikely.

If no TCEQ benchmark was available for a detected constituent, the following hierarchy of benchmarks was used:

1. The lowest value from the following three sources: USEPA Region 5 ESLs (USEPA, 2003b); PRGs from Efroymson et al. (1997a); and Canadian interim sediment quality guidelines from CCME (2002).
2. USEPA Region 4 ecological benchmark screening values for sediment (USEPA, 2001a).
3. Other available screening values from Los Alamos National Laboratory Ecorisk Data Base (LANL, 2005).

When no benchmark was available, a benchmark was selected based on an appropriate surrogate chemical. The following surrogates were used for constituents detected in sediment:

- 2,3,7,8-TCDD for dioxins

If no benchmark was available and no surrogate could be identified, the constituent was conservatively retained as a COPEC, with the exception of chloride. Chloride was not retained as a COPEC because toxicity values do not exist that would allow a quantitative estimation of risk to wildlife receptors. Because chloride is unlikely to be a significant contaminant at LHAAP, it was not carried forward as a COPEC in Step 3. The Step 3 analysis includes a discussion of the uncertainty associated with the characterization of ecological impacts of COPECs without benchmarks and adequate toxicity data (**Section 8.0**).

6.2.2 Comparison of Installation Data to Benchmarks

LHAAP constituent concentrations were compared with screening benchmarks to determine the COPECs that were carried forward to the direct contact evaluations and the food chain models. For purposes of this comparison with benchmarks, the 95 percent UCL was used as the representative constituent concentration for each sub-area and/or watershed. The 95 percent UCL is defined as “a value that, when calculated repeatedly for randomly drawn subsets of site data, equals or exceeds the true mean 95 percent of the time” (USEPA, 2002a). The calculation of the 95 percent UCL was discussed in greater detail in **Section 6.1.3.3**. If there were fewer than five samples, a 95 percent UCL was not calculated and the MDC was used as the screening concentration.

6.3 Results of Selection of Preliminary Constituents of Potential Ecological Concern

6.3.1 Terrestrial Preliminary COPECs

The terrestrial evaluation for LHAAP was comprised of the evaluation of analytical data from over 1,500 samples located within the Industrial, Low Impact, and Waste Sub-Areas. The sub-areas were delineated previously based on common historical uses and similar ecological habitat. The results of the COPEC screen for each sub-area are provided in the following sub-sections.

6.3.1.1 Industrial Sub-Area

One thousand one-hundred eleven total soil (i.e., 0 to 3 feet bgs) samples from the Industrial Sub-Area were included in the Step 3 evaluation (**Table 6-2**). Of the analytes detected in these samples, 35 were selected as COPECs, including 13 metals, two general chemistry parameters, perchlorate, TCDD-TEQ, four PCBs, and 14 pesticides (**Table 6-17**). Twenty of the 35 COPECs would have been eliminated based on one or more criteria, but were included on the TCEQ list of bioaccumulative compounds and retained for further evaluation. Three constituents (TNT, ethyl methane sulfonate, and p-isopropyl toluene) had a frequency of detection between 3 and 5 percent and were evaluated using a spatial analysis approach (**Figures 6-4, 6-5** and **6-6**, respectively) to determine whether a hot spot might be present that would preclude elimination based on the low frequency of detection criterion. Based on this spatial evaluation none of these three constituents demonstrated the presence of a hot spot and they were not retained for further evaluation.

6.3.1.2 Low Impact Sub-Area

One-hundred eighty-four total soil (i.e., 0 to 3 feet bgs) samples from the Low Impact Sub-Area were included in the Step 3 evaluation (**Table 6-3**). Of the analytes detected in these samples, 38 were selected as COPECs, including 13 metals, two general chemistry parameters, perchlorate, TCDD-TEQ, five PCBs, 14 pesticides, and two SVOCs (**Table 6-18**). Twenty-four of the 38 COPECs would have been screened out based on one or more criterion but were included on the TCEQ list of bioaccumulative compounds and retained for further evaluation. One constituent (boron) had a frequency of detection between 3 and 5 percent and was evaluated using a spatial analysis approach (**Figure 6-7**) to determine whether a hot spot might be present that would preclude elimination based on the low frequency of detection criterion. Based on this spatial evaluation this constituent did not demonstrate the presence of a hot spot and it was not retained for further evaluation.

6.3.1.3 Waste Sub-Area

Two-hundred eighty-five total soil (i.e., 0 to 3 feet bgs) samples from the Waste Sub-Area were included in the Step 3 evaluation (**Table 6-4**). Of the analytes detected in these samples, 37 were selected as COPECs, including 14 metals, two general chemistry parameters, TCDD-TEQ, six nitroaromatics, three PCBs, seven pesticides, perchlorate, two SVOCs, and one VOC (**Table 6-19**). Fifteen of the 37 COPECs would have been screened out based on one or more criteria but were included on the TCEQ list of bioaccumulative compounds and retained for further evaluation. One constituent (1,3-dinitrobenzene [DNB]) had a frequency of detection between 3 and 5 percent and was evaluated using a spatial analysis approach (**Figure 6-8**) to determine whether a hot spot might be present that would preclude elimination based on the low frequency of detection criterion. Based on this spatial evaluation this constituent did demonstrate the potential presence of a hot spot and it was retained for further evaluation.

6.3.2 Aquatic Preliminary COPECs

The aquatic evaluation for LHAAP was comprised of the evaluation of surface water and sediment data from four aquatic watersheds: Harrison Bayou, Goose Prairie Creek, Central Creek, and Saunders Branch.

The results of the COPEC screen for each watershed are provided in the following sub-sections.

6.3.2.1 Harrison Bayou Watershed

Two-hundred forty surface water samples and 76 sediment samples from the Harrison Bayou watershed were included in the Step 3 evaluation (**Tables 6-5** and **6-6**). Of the analytes detected in the surface water samples, 14 were selected as COPECs, including ten metals, three general chemistry parameters, and TCDD-TEQ (**Table 6-20**). Two of the 14 COPECs would have been screened out based on one or more criteria but were included on the TCEQ list of bioaccumulative compounds and retained for further evaluation.

Of the analytes detected in the sediment samples, 13 were selected as COPECs, including nine metals, two general chemistry parameters, TCDD-TEQ, and one SVOC (**Table 6-21**). Six of the 13 COPECs would have been screened out based on one or more criteria but were included on the TCEQ list of bioaccumulative compounds and retained for further evaluation.

6.3.2.2 Goose Prairie Creek Watershed

Three-hundred four surface water samples and 124 sediment samples from the Goose Prairie Creek watershed were included in the Step 3 evaluation (**Tables 6-7** and **6-8**). Of the analytes detected in the surface water samples, 14 were selected as COPECs, including nine metals, three general chemistry parameters, TCDD-TEQ, and one SVOC (**Table 6-22**). Two of the 14 COPECs would have been screened out based on one or more criteria but were included on the TCEQ list of bioaccumulative compounds and retained for further evaluation.

Of the analytes detected in the sediment samples, 16 were selected as COPECs, including 10 metals, one general chemistry parameter, the TCDD-TEQ, one PCB, and three pesticides

(**Table 6-23**). Five of the 16 COPECs would have been screened out based on one or more criteria but were included on the TCEQ list of bioaccumulative compounds and retained for further evaluation. Three constituents (TNT, phenanthrene, and phenol) had a frequency of detection between 3 and 5 percent and were evaluated using a spatial analysis approach (**Figures 6-9, 6-10,** and **6-11**, respectively) to determine whether a hot spot might be present that would preclude elimination based on the low frequency of detection criterion. Based on this spatial evaluation these constituents did not demonstrate the presence of a hot spot and they were not retained for further evaluation.

6.3.2.3 Central Creek Watershed

Forty-two surface water samples and 67 sediment samples from the Central Creek watershed were included in the Step 3 evaluation (**Tables 6-9** and **6-10**). Of the analytes detected in the surface water samples, 12 were selected as COPECs, including eight metals, three general chemistry parameters, and TCDD-TEQ (**Table 6-24**). None of the COPECs that were screened out based on one or more criteria were on the TCEQ list of bioaccumulative compounds.

Of the analytes detected in the sediment samples, 13 were selected as COPECs, including 9 metals, two general chemistry parameters, TCDD-TEQ, and one VOCs (**Table 6-25**). Six of the 13 COPECs would have been screened out based on one or more criteria but were included on the TCEQ list of bioaccumulative compounds and retained for further evaluation.

6.3.2.4 Saunders Branch Watershed

Nine surface water samples and 19 sediment samples from the Saunders Branch watershed were included in the Step 3 evaluation (**Tables 6-11** and **6-12**). Of the analytes detected in the surface water samples, four were selected as COPECs, including two metals and two general chemistry parameters (**Table 6-26**). None of the COPECs that were screened out based on one or more criteria were on the TCEQ list of bioaccumulative compounds.

Of the analytes detected in the sediment samples, 14 were selected as COPECs, including ten metals, two general chemistry parameters, TCDD-TEQ, and one SVOC (**Table 6-27**). Six of the 14 COPECs would have been screened out based on one or more criteria but were included on the TCEQ list of bioaccumulative compounds and retained for further evaluation.

6.3.3 Summary of Preliminary COPECs

The list of preliminary COPECs for all media is presented in **Table 6-28**. Seventeen metals, two VOCs, five SVOCs, TCDD-TEQ, 15 OC pesticides, five PCBs, six nitroaromatic compounds, perchlorate, and three general chemistry parameters were identified as preliminary COPECs in total soil, sediment, and/or surface water. These chemicals were carried forward in the Step 3 evaluation for further analysis.

Table 6-1
Summary of Terrestrial and Aquatic COPECs from Previous Studies

Table 6-2
Sample Summary for Total Soil Industrial Sub-Area

Table 6-3
Sample Summary for Total Soil Low Impact Sub-Area

Table 6-4
Sample Summary for Total Soil Waste Sub-Area

Table 6-5
Sample Summary for Surface Water, Harrison Bayou

Table 6-6
Sample Summary for Sediment, Harrison Bayou

Table 6-7
Sample Summary for Surface Water, Goose Prairie Creek

Table 6-8
Sample Summary for Sediment, Goose Prairie Creek

Table 6-9
Sample Summary for Surface Water, Central Creek

Table 6-10
Sample Summary for Sediment, Central Creek

Table 6-11
Sample Summary for Surface Water, Saunders Branch

Table 6-12
Sample Summary for Sediment, Saunders Branch

Table 6-13
Toxicity Equivalent Factors for Dioxin/Furan Congeners Used to Develop the 2,3,7,8-TCDD Toxic Equivalency Quotient Concentrations for the Step 3 Evaluation

Table 6-14
Selection of Ecological Soil Screening Toxicity Values for Detected Constituents at LHAAP

Table 6-15
Selection of Ecological Surface Water Screening Toxicity Values for Detected Constituents at LHAAP

Table 6-16
Selection of Ecological Sediment Screening Toxicity Values for Detected Constituents at LHAAP

Table 6-17
Selection of Constituents of Potential Ecological Concern, Total Soil, Industrial Sub-Area

Table 6-18
Selection of Constituents of Potential Ecological Concern, Total Soil, Low Impact Sub-Area

Table 6-19
Selection of Constituents of Potential Ecological Concern, Total Soil, Waste Sub-Area

Table 6-20
Selection of Constituents of Potential Ecological Concern, Surface Water, Harrison Bayou Watershed

Table 6-21
Selection of Constituents of Potential Ecological Concern, Sediment, Harrison Bayou Watershed

Table 6-22
Selection of Constituents of Potential Ecological Concern, Surface Water, Goose Prairie Creek Watershed

Table 6-23
Selection of Constituents of Potential Ecological Concern, Sediment, Goose Prairie Creek Watershed

Table 6-24
Selection of Constituents of Potential Ecological Concern, Surface Water, Central Creek Watershed

Table 6-25
Selection of Constituents of Potential Ecological Concern, Sediment, Central Creek Watershed

Table 6-26
Selection of Constituents of Potential Ecological Concern, Surface Water, Saunders Branch Watershed

Table 6-27
Selection of Constituents of Potential Ecological Concern, Sediment, Saunders Creek Watershed

Table 6-28
Preliminary Constituents of Potential Ecological Concern

Table 6-1
Summary of Terrestrial and Aquatic COPECs from Previous Studies [1]

COPEC	Terrestrial	Aquatic
Aluminum	X[a]	X
Antimony	X	X
Arsenic	X[a]	X
Barium	X[a]	X
Beryllium	X	X
Cadmium	X	X
Calcium	X[ab]	X[b]
Chloride	X[b]	
Chromium	X[a]	X
Cobalt	X[a]	X
Copper	X[a]	X
Cyanide	X[b]	X[b]
Iron	X[ab]	X
Lead	X[a]	X
Magnesium	X[ab]	X[b]
Manganese	X[a]	X
Mercury	X	X
Nickel	X[a]	X
Nitrate	X[b]	
Perchlorate	X[b]	X[b]
Potassium	X[ab]	X[b]
Selenium	X	X
Silver	X[a]	X
Sodium	X[b]	X[b]
Strontium	X[ab]	X
Sulfate	X[b]	X[b]
Thallium	X[a]	X
Vanadium	X	X
Zinc	X[a]	X
2,4-Dinitrotoluene	X[b]	
2,6-Dinitrotoluene	X[b]	X[b]
2-Amino-4,6-dinitrotoluene	X[b]	
4-Amino-2,6-dinitrotoluene	X[b]	X[b]
m-Dinitrobenzene	X[b]	
HMX	X[b]	
Nitrobenzene	X[b]	
1,3,5-Trinitrobenzene	X[b]	
Sym-trinitrobenzene	X[b]	
2,4,6-Trinitrotoluene	X[b]	
Aldrin	X[b]	
Aroclor 1016	X	
Aroclor 1221	X	
Aroclor 1232	X	
Aroclor 1242	X	
Aroclor 1248	X	
Aroclor 1254	X	
Aroclor 1260	X	

COPEC	Terrestrial	Aquatic
Acetone	X[b]	X
Benzene	X[b]	
Bromodichloromethane		X[b]
2-Butanone	X	X
Carbon Disulfide	X	X
Chloroform	X	
1,1-Dichloroethane	X[b]	
1,2-Dichloroethane	X[b]	X
1,1-Dichloroethene	X[b]	X
1,2-Dichloroethene	X[b]	
cis-1,2-Dichloroethene	X[b]	X
Dichlorodifluoromethane	X[b]	
trans-1,3-Dichloropropene	X[b]	
Ethylbenzene	X[b]	X
2-Hexanone	X[b]	
p-Isopropyltoluene		X[b]
Methylene chloride	X[b]	
Styrene	X	
Tetrachloroethene	X[b]	
Toluene	X	X
1,1,1-Trichloroethane	X[b]	
Trichloroethene	X[b]	X
Trichlorofluoromethane	X[b]	X
Vinyl chloride	X[b]	X[b]
Xylenes	X[b]	
Acrolein		X
Benzoic acid	X[b]	
bis(2-Ethylhexyl)phthalate	X[b]	X
Butylbenzyl phthalate	X[b]	
p-Cymene	X[b]	
Di-n-butyl phthalate	X	X
Di-n-octyl phthalate	X[b]	
Dioxins	X[b]	X[b]
Furans	X	X[b]
Hexachlorobenzene	X[b]	
1-Methylethyl benzene	X[b]	
3-Methylphenol		X[b]
4-Methylphenol	X[b]	X
Phenol		X
Acenaphthylene	X[b]	X[b]
Anthracene	X[b]	X
Benzo(a)anthracene	X[b]	X
Benzo(a)pyrene	X[b]	X
Benzo(b)fluoranthene	X[b]	X[b]
Benzo(k)fluoranthene	X[b]	X[b]
Benzo(g,h,i)perylene	X[b]	X[b]
Chrysene	X[b]	X

Table 6-1
Summary of Terrestrial and Aquatic COPECs from Previous Studies [1]

COPEC	Terrestrial	Aquatic
alpha-BHC	X[b]	
Chlordane	X[b]	
alpha-Chlordane	X[b]	
gamma-Chlordane	X[b]	
trans-Chlordane	X[b]	
4,4'-DDD	X[b]	
4,4'-DDE	X[b]	
4,4'-DDT	X[b]	
Dieldrin	X[b]	
Endosulfan sulfate	X[b]	
Endrin	X[b]	
Heptachlor	X[b]	
Heptachlor epoxide	X[b]	
Lindane	X[b]	
Silvex	X[b]	
Dibenzo(a,h)anthracene	X[b]	X
Dibenzofuran	X[b]	X[b]
Fluoranthene	X[b]	X
Fluorene		X
Indeno(1,2,3-cd)pyrene	X[b]	
2-Methylnaphthalene	X[b]	
Naphthalene	X[b]	X
Phenanthrene	X[b]	X
Pyrene	X[b]	

Notes:

[1] From Jacobs screening ecological risk assessments. Background was not considered in the screening ERAs as a criteria for elimination of COPECs.

[a] Constitutent may be present at concentration comparable to background.

[b] Constitutent was selected as COPEC however a screening benchmark was not available.

Aquatic	surface water and/or sediment
BHC	benzene hexachloride
COPEC	contaminant of potential ecological concern
DDD	dichlorodiphenyldichloroethane
DDE	dichlorodiphenyldichloroethylene
DDT	dichlorodiphenyltrichloroethane
HMX	high melting explosive
LHAAP	Longhorn Army Ammunition Plant
Terrestrial	soil

00049678

Table 6-2
Sample Summary for Total Soil
Industrial Sub-Area

Location	Sample No [a]	Date	Depth (ft bgs)	Analyses
Total Soil [b]				
01A-SB01	LH01A-SB01-2001	12/15/93	0 - 0	Explosives, General Chemistry, Metals[c], SVOC, VOC
01A-SB01	LH01A-SB01-2001QC	12/15/93	0 - 0	General Chemistry, Metals[c]
01A-SB01	LH01A-SB01-2002	12/15/93	2.5 - 2.5	Explosives, General Chemistry, Metals[c], SVOC, VOC
01A-SB01	LH01A-SB01-2002QC	12/15/93	2.5 - 2.5	General Chemistry
01A-SB02	LH01A-SB02-2001	12/14/93	0 - 0	Explosives, General Chemistry, Metals[c], SVOC, VOC
01A-SB02	LH01A-SB02-2002	12/14/93	2.5 - 2.5	Explosives, General Chemistry, Metals[c], SVOC, VOC
01A-SB03	LH01A-SB03-2001	12/14/93	0 - 0	Explosives, General Chemistry, Metals[c], SVOC, VOC
01A-SB03	LH01A-SB03-2001QC	12/14/93	0 - 0	General Chemistry, Metals[f], Acetone
01A-SB03	LH01A-SB03-2002	12/14/93	2.5 - 2.5	Explosives, General Chemistry, Metals[c], SVOC, VOC
01A-SB03	LH01A-SB03-2002QC	12/14/93	2.5 - 2.5	Acetone
01A-SB04	LH01A-SB04-2001	12/13/93	0 - 0	Explosives, General Chemistry, Metals[c], SVOC, VOC
01A-SB04	LH01A-SB04-2001QCS	12/14/93	0 - 0	Metals [f], SVOC
01A-SB04	LH01A-SB04-2002	12/13/93	2.5 - 2.5	Explosives, General Chemistry, Metals[c], SVOC, VOC
01A-SD01	LH01A-SD01-3001	12/10/93	0 - 0	Explosives, General Chemistry, Metals[c], SVOC, VOC
01A-SD01	LH01A-SD01-3001QC	12/10/93	0 - 0	Explosives, General Chemistry, Metals[c], SVOC, VOC
01A-SD02	LH01A-SD02-3001	12/10/93	0 - 0	Explosives, General Chemistry, Metals[c], SVOC, VOC
01A-SD02	LH01A-SD02-3001QC	12/10/93	0 - 0	General Chemistry, VOC
01A-SD03	LH01A-SD03-3001	12/12/93	0 - 0	Explosives, General Chemistry, Metals[c], SVOC, VOC
01MW01	LH01A-MW01-2001	12/2/93	0 - 0	Explosives, General Chemistry, Metals[c], SVOC, VOC
01MW01	LH01A-MW01-2002	12/2/93	2.5 - 2.5	Explosives, General Chemistry, Metals[c], SVOC, VOC
01MW02	LH01A-MW02-2001	12/5/93	0 - 0	Explosives, General Chemistry, Metals[c], SVOC, VOC
01MW02	LH01A-MW02-2001QC	12/5/93	0 - 0	General Chemistry, Metals[c], di-n-Butyl phthalate
01MW02	LH01A-MW02-2002	12/5/93	2.5 - 2.5	Explosives, General Chemistry, Metals[c], SVOC, VOC
01MW03	LH01A-MW03-2001	12/7/93	0 - 0	Explosives, General Chemistry, Metals[c], SVOC, VOC
01MW03	LH01A-MW03-2001QC	12/7/93	0 - 0	General Chemistry, Metals[c]
01MW03	LH01A-MW03-2002	12/7/93	2.5 - 2.5	Explosives, General Chemistry, Metals[c], SVOC, VOC
01MW04	LH01A-MW04-2001	12/10/93	0 - 0	Explosives, General Chemistry, Metals[c], SVOC, VOC
01MW04	LH01A-MW04-2001QC	12/10/93	0 - 0	Metals [g]
01MW04	LH01A-MW04-2002	12/10/93	2.5 - 2.5	Explosives, General Chemistry, Metals[c], SVOC, VOC
01MW05	LH01A-MW05-2001	12/8/93	0 - 0	Explosives, General Chemistry, Metals[c], SVOC, VOC
01MW05	LH01A-MW05-2001QC	12/8/93	0 - 0	General Chemistry
01MW05	LH01A-MW05-2002	12/8/93	2.5 - 2.5	Explosives, General Chemistry, Metals[c], SVOC, VOC
01SB22	C940819-01SB22-N00	8/19/94	0 - 0	Explosives[d], General Chemistry, Metals[c]
01SB22	C940819-01SB22-N33	8/19/94	3 - 3	Explosives[d], General Chemistry, Metals[c]
01SB22	LH01-SB22 0-2.5	3/15/93	0 - 2.5	Explosives, General Chemistry, Metals[c], SVOC, VOC
01SB22	LH01-SB22 0-2.5QC	3/15/93	0 - 2.5	Explosives, General Chemistry, Metals[c], SVOC, VOC
01SB23	C940819-01SB23-N00	8/19/94	0 - 0	Explosives[d], General Chemistry, Metals[c]
01SB23	C940819-01SB23-N33	8/19/94	3 - 3	Explosives[d], General Chemistry, Metals[c]
01SB23	LH01-SB23 0-2.5	3/15/93	0 - 2.5	Explosives, General Chemistry, Metals[c], SVOC, VOC
01SB24	C940823-01SB24-N00	8/23/94	0 - 0	Chromium, Mercury
01SB24	LH01-SB24 0-2.5	3/16/93	0 - 2.5	Explosives, General Chemistry, Metals[c], SVOC, VOC
01SB25	LH01-SB25 0-2.5	3/16/93	0 - 2.5	Explosives, General Chemistry, Metals[c], SVOC, VOC
01SB26	LH01-SB26 0-2.5	3/16/93	0 - 2.5	Explosives, General Chemistry, Metals[c], SVOC, VOC
01SB26	LH01-SB26 0-2.5QC	3/16/93	0 - 2.5	Explosives, General Chemistry, Metals[c], SVOC, VOC
01SB27	C940824-01SB27-N00	8/24/94	0 - 0	Explosives[d], General Chemistry, Metals[c]
01SB27	C940824-01SB27-QC00	8/24/94	0 - 0	Explosives[d], General Chemistry, Metals[c]
01SB27	C940824-01SB27-N33	8/24/94	3 - 3	General Chemistry, Metals[c]
01SB27	C940824-01SB27-QC33	8/24/94	3 - 3	General Chemistry, Metals[c]
01SB27	LH01-SB27 0-2.5	3/17/93	0 - 2.5	Explosives, General Chemistry, Metals[c], SVOC, VOC
01SB28	C930319-01SB28-N00	3/19/93	0 - 0	Explosives, General Chemistry, Metal[c], SVOC, VOC
01SB28	LH01-SB28 (0-2.	3/17/93	0 - 2.5	Explosives, General Chemistry, Metals[c], SVOC, VOC
01SB29	C930330-01SB29-N00	3/30/93	0 - 0	Explosives, General Chemistry, Metal[c], SVOC, VOC
01SB29	LH01-SB29 (0-2.	3/17/93	0 - 2.5	Explosives, General Chemistry, Metals[c], SVOC, VOC
01SD06	LH01-SD06	3/31/93	0 - 0	Explosives, General Chemistry, Metals[c], SVOC, VOC
01SD07	C930318-01SD07-N00	3/18/93	0 - 0	Explosives, General Chemistry, Metals[c], SVOC, VOC
01SD07	LH01-SD07	3/31/93	0 - 0	Explosives, General Chemistry, Metals[c], SVOC, VOC
01SD08	C930320-01SD08-N00	3/20/93	0 - 0	Explosives, General Chemistry, Metals[c], SVOC, VOC
01SD08	C930320-01SD08-QC00	3/20/93	0 - 0	Explosives, General Chemistry, Metals[c], SVOC, VOC
01SD08	LH01-SD08	3/31/93	0 - 0	Explosives, General Chemistry, Metals[c], SVOC, VOC
01SD08	LH01-SD08-QC	3/31/93	0 - 0	Explosives, General Chemistry, Metals[c], SVOC, VOC
01SD09	C930318-01SD09-N00	3/18/93	0 - 0	Explosives, General Chemistry, Metals[c], SVOC, VOC
01SD09	LH01-SD09	3/31/93	0 - 0	Explosives, General Chemistry, Metals[c], SVOC, VOC
01SD10	C930330-01SD10-N00	3/30/93	0 - 0	Explosives, General Chemistry, Metals[c], SVOC, VOC
01SD10	LH01-SD10	3/31/93	0 - 0	Explosives, General Chemistry, Metals[c], SVOC, VOC
01SD11	C930330-01SD11-N00	3/30/93	0 - 0	Explosives, General Chemistry, Metals[c], SVOC, VOC
01SD11	LH01-SD11	3/31/93	0 - 0	Explosives, General Chemistry, Metals[c], SVOC, VOC
01SD12	C930330-01SD12-N00	3/30/93	0 - 0	Explosives, General Chemistry, Metals[c], SVOC, VOC

Table 6-2
Sample Summary for Total Soil
Industrial Sub-Area

Location	Sample No [a]	Date	Depth (ft bgs)	Analyses
01SD12	C930330-01SD12-QC00	3/30/93	0 - 0	Explosives, General Chemistry, Metals[c], SVOC, VOC
01SD12	LH01-SD12	3/31/93	0 - 0	Explosives, General Chemistry, Metals[c], SVOC, VOC
04SB01	04SB01(0-0.5)	6/2/00	0 - 0.5	Perchlorate
04SB01	04SB01(0-0.5)QC	6/2/00	0 - 0.5	Perchlorate
04SB01	04SB01(1-2)	6/2/00	1 - 2	Perchlorate
04SB02	04SB02(0-0.5)	6/2/00	0 - 0.5	Perchlorate
04SB02	04SB02(1-2)	6/2/00	1 - 2	Perchlorate
04SB03	04SB03(0-0.5)	12/14/00	0 - 0.5	Dioxin/Furans, Explosives, Metals, Perchlorate, Pest/PCB, SVOC, VOC
04SB03	04SB03(0-0.5)QC	12/14/00	0 - 0.5	Dioxin/Furans, Explosives, Metals, Perchlorate, Pest/PCB, SVOC, VOC
04SB03	04SB03(1-3)	12/7/00	1 - 3	Dioxin/Furans, Explosives, Metals, Perchlorate, Pest/PCB, SVOC, VOC
04SB04	04SB04(0-0.5)	12/14/00	0 - 0.5	Dioxin/Furans, Explosives, Metals, Perchlorate, Pest/PCB, SVOC, VOC
04SB04	04SB04(0-0.5)QC	12/14/00	0 - 0.5	Dioxin/Furans, Explosives, Metals, Perchlorate, Pest/PCB, SVOC, VOC
04SB04	04SB04(1-3)	12/6/00	1 - 3	Dioxin/Furans, Explosives, Metals, Perchlorate, Pest/PCB, SVOC, VOC
04SB05	04SB05(0-0.5)	12/14/00	0 - 0.5	Dioxin/Furans, Explosives, Metals, Perchlorate, Pest/PCB, SVOC, VOC
04SB05	04SB05(1-3)	12/6/00	1 - 3	Dioxin/Furans, Explosives, Metals, Perchlorate, Pest/PCB, SVOC, VOC
04SB06	04SB06(0-0.5)	12/14/00	0 - 0.5	Dioxin/Furans, Explosives, Metals, Perchlorate, Pest/PCB, SVOC, VOC
04SB06	04SB06(1-3)	12/6/00	1 - 3	Dioxin/Furans, Explosives, Metals, Perchlorate, Pest/PCB, SVOC, VOC
08SB01	08SB01(0-0.5)	6/2/00	0 - 0.5	Perchlorate
08SB01	08SB01(1-2)	6/2/00	1 - 2	Perchlorate
08SB01	08SB01(1-3)	12/6/00	1 - 3	Dioxin/Furans, Explosives, Metals, Perchlorate, Pest/PCB, SVOC, VOC
08SB02	08SB02(0-0.5)	6/2/00	0 - 0.5	Perchlorate
08SB02	08SB02(1-2)	6/2/00	1 - 2	Perchlorate
08SB03	08SB03(0-0.5)	12/14/00	0 - 0.5	Dioxin/Furans, Explosives, Metals, Perchlorate, Pest/PCB, SVOC, VOC
08SB03	08SB03(1-3)	12/6/00	1 - 3	Dioxin/Furans, Explosives, Metals, Perchlorate, Pest/PCB, SVOC, VOC
08SB04	08SB04(0-0.5)	12/14/00	0 - 0.5	Dioxin/Furans, Explosives, Metals, Perchlorate, Pest/PCB, SVOC, VOC
08SB04	08SB04(1-3)	12/6/00	1 - 3	Dioxin/Furans, Explosives, Metals, Perchlorate, Pest/PCB, SVOC, VOC
08SB05	08SB05(0-0.5)	12/7/00	0 - 0.5	Explosives, Metals, SVOC, VOC
08SB05	08SB05(1-3)	12/7/00	1 - 3	Explosives, Metals, SVOC, VOC
08SB05	08SB05(1-3)QC	12/7/00	1 - 3	Explosives, Metals, SVOC, VOC
25C-45	25C-45(1)	11/17/99	0 - 0.5	General Chemistry, Perchlorate
25C-45	25C-45(2)	11/17/99	1 - 2	General Chemistry, Perchlorate
25C-46	25C-46(1)	11/17/99	0 - 0.5	General Chemistry, Perchlorate
25C-46	25C-46(2)	11/17/99	1 - 2	General Chemistry, Perchlorate
25C-47	25C-47(1)	11/17/99	0 - 0.5	General Chemistry, Perchlorate
25C-47	25C-47(2)	11/17/99	1 - 2	General Chemistry, Perchlorate
25C-47	25C-47 (2) QA	11/17/99	1 - 2	General Chemistry, Perchlorate
25C-48	25C-48(1)	11/17/99	0 - 0.5	General Chemistry, Perchlorate
25C-48	25C-48(2)	11/17/99	1 - 2	General Chemistry, Perchlorate
25C-49	25C-49(1)	11/17/99	0 - 0.5	General Chemistry, Perchlorate
25C-49	25C-49(2)	11/17/99	1 - 2	General Chemistry, Perchlorate
25C-50	25C-50(1)	11/17/99	0 - 0.5	General Chemistry, Perchlorate
25C-50	25C-50(2)	11/17/99	1 - 2	General Chemistry, Perchlorate
25C-51	25C-51(1)	11/17/99	0 - 0.5	General Chemistry, Perchlorate
25C-51	25C-51(2)	11/17/99	1 - 2	General Chemistry, Perchlorate
25C-52	25C-52(1)	11/17/99	0 - 0.5	General Chemistry, Perchlorate
25C-52	25C-52(2)	11/17/99	1 - 2	General Chemistry, Perchlorate
25C-53	25C-53(1)	11/17/99	0 - 0.5	General Chemistry, Perchlorate
25C-53	25C-53(2)	11/17/99	1 - 2	General Chemistry, Perchlorate
25C-54	25C-54(1)	11/17/99	0 - 0.5	General Chemistry, Perchlorate
25C-54	25C-54(2)	11/17/99	1 - 2	General Chemistry, Perchlorate
25C-55	25C-55(1)	11/17/99	0 - 0.5	General Chemistry, Perchlorate
25C-55	25C-55(2)	11/17/99	1 - 2	General Chemistry, Perchlorate
25C-55	25C-55 (2) QA	11/17/99	1 - 2	General Chemistry, Perchlorate
25C-56	25C-56(1)	11/17/99	0 - 0.5	General Chemistry, Perchlorate
25C-56	25C-56(2)	11/17/99	1 - 2	General Chemistry, Perchlorate
25C-57	25C-57(1)	11/17/99	0 - 0.5	General Chemistry, Perchlorate
25C-57	25C-57(2)	11/17/99	1 - 2	General Chemistry, Perchlorate
25C-58	25C-58(1)	11/17/99	0 - 0.5	General Chemistry, Perchlorate
25C-58	25C-58(2)	11/17/99	1 - 2	General Chemistry, Perchlorate
25C-59	25C-59(1)	11/17/99	0 - 0.5	General Chemistry, Perchlorate
25C-59	25C-59(2)	11/17/99	1 - 2	General Chemistry, Perchlorate
25C-59	25C-59 (2) QA	11/17/99	1 - 2	General Chemistry, Perchlorate
25C-60	25C-60(1)	11/17/99	0 - 0.5	General Chemistry, Perchlorate
25C-60	25C-60(2)	11/17/99	1 - 2	General Chemistry, Perchlorate
25C-61	25C-61(1)	11/17/99	0 - 0.5	General Chemistry, Perchlorate
25C-61	25C-61(2)	11/17/99	1 - 2	General Chemistry, Perchlorate
25C-62	25C-62(1)	11/17/99	0 - 0.5	General Chemistry, Perchlorate
29SB01	29SB01(0-2)	5/18/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
29SB02	29SB02(0-2)	5/26/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
29SB03	29SB03(0-2)	5/26/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
29SB04	29SB04(0-2)	5/29/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
29SB05	29SB05(0-2)	5/27/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
29SB06	29SB06(0-2)	5/19/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
29SB07	29SB07(0-2)	5/19/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
29SB08	29SB08(0-2)	5/27/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
29SB09	29SB09(0-2)	5/28/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
29SB09	29SB09(0-2)QC	5/28/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
29SB10	29SB10(0-2)	5/19/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
29SB11	29SB11(0-2)	5/25/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC

Table 6-2
Sample Summary for Total Soil
Industrial Sub-Area

Location	Sample No [a]	Date	Depth (ft bgs)	Analyses
29SB12	29SB12(0-2)	5/30/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
29SB13	29SB13(0-2)	5/29/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
29SB14	29SB14(0-2)	5/30/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
29SB15	29SB15-(0-2)	6/3/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
29SB53B	29SB53(000.0)	4/14/95	0 - 0	Explosives[d], Metals [c]
29SB54	29SB54(000.0)	4/14/95	0 - 0	Explosives[d], Metals [c]
29SB55	29SB55(000.0)	3/20/95	0 - 0	Explosives[d], Metals [c]
29SB56	29SB56(000.0)	4/14/95	0 - 0	Explosives[d], Metals [c]
29SB57	29SB57(000.0)	4/14/95	0 - 0	Explosives[d], Metals [c]
29SB58	29SB58(000.0)	4/15/95	0 - 0	Explosives[d], Metals [c]
29SB59	29SB59(000.0)	4/15/95	0 - 0	Explosives[d], Metals [c]
29SB60	29SB60(000.0)	4/14/95	0 - 0	Explosives[d], Metals [c]
29SB61	29SB61(000.0)	4/15/95	0 - 0	Explosives[d], Metals [c]
29SB61	29SB61(000.0)QC	4/15/95	0 - 0	Explosives[d], Metals [c]
29SB62	29SB62(000.0)	4/15/95	0 - 0	Explosives[d], Metals [c]
29SB63	29SB63(000.0)	4/15/95	0 - 0	Explosives[d], Metals [c]
29SB64	29SB64(000.0)	4/14/95	0 - 0	Explosives[d], Metals [c]
29SB67	29SB67(000.0)	4/17/95	0 - 0	Explosives[d], Metals [c]
29SB68	29SB68(000.0)	4/15/95	0 - 0	Explosives[d], Metals [c]
29SB69	29SB69(000.0)	4/16/95	0 - 0	Explosives[d], Metals [c]
29SB70	29SB70(000.0)	4/16/95	0 - 0	Explosives[d], Metals [c]
29SB71	29SB71(000.0)	4/14/95	0 - 0	Explosives[d], Metals [c]
29SB72	29SB72(000.0)	4/14/95	0 - 0	Explosives[d], Metals [c]
29SB73	29SB73(000.0)	4/15/95	0 - 0	Explosives[d], Metals [c]
29SB74	29SB74(000.0)	4/16/95	0 - 0	Explosives[d], Metals [c]
29SB75	29SB75(000.0)	4/16/95	0 - 0	Explosives[d], Metals [c]
29SB75	29SB75(000.0)QC	4/16/95	0 - 0	Explosives[d], Metals [c]
29SB76	29SB76(000.0)	4/15/95	0 - 0	Explosives[d], Metals [c]
29SB77	29SB77(0-0.5)	5/31/00	0 - 0.5	Perchlorate
29SB77	29SB77(1-2)	5/31/00	1 - 2	Perchlorate
29SB78	29SB78(0-0.5)	5/31/00	0 - 0.5	Perchlorate
29SB78	29SB78(0-0.5)QC	5/31/00	0 - 0.5	Perchlorate
29SB78	29SB78(1-2)	5/31/00	1 - 2	Perchlorate
29SD01	29SD01(0.5)	4/29/93	0 - 0.5	Explosives, General Chemistry, Metals[c], SVOC, VOC
29SD10	29SD10(0-0.5)	4/28/93	0 - 0.5	Explosives, General Chemistry, Metals[c], SVOC, VOC
29SD11	29SD11(0-0.5)	4/28/93	0 - 0.5	Explosives, General Chemistry, Metals[c], SVOC, VOC
29SD24	29SD24	10/7/98	0 - 0	Dioxin/Furans
29SD24	C-29SD24-981008	10/8/98	0 - 0	Explosives, Metals, Pest/PCB, SVOC, VOC
29SD26	29SD26	10/7/98	0 - 0	Explosives, Metals, VOC
29SS01	29SS01(0-0.5)	7/24/98	0 - 0.5	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
29SS02	29SS02(0-0.5)	7/25/98	0 - 0.5	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
29SS02	29SS02(0-0.5)QC	7/25/98	0 - 0.5	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
29SS03	29SS03(0-0.5)	7/25/98	0 - 0.5	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
29SS04	29SS04(0-0.5)	7/25/98	0 - 0.5	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
29SS05	29SS05(0-0.5)	7/25/98	0 - 0.5	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
29SS06	29SS06(0-0.5)	7/25/98	0 - 0.5	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
29SS06	29SS06(1-3)	7/25/98	1 - 3	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
29SS06	29SS06(1-3)QC	7/25/98	1 - 3	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
29SS07	29SS07(0-0.5)	7/25/98	0 - 0.5	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
29SS07	29SS07(1-3)	7/25/98	1 - 3	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
29SS08	29SS08(0-0.5)	7/25/98	0 - 0.5	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
29SS08	29SS08(1-3)	7/25/98	1 - 3	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
29WL02	LH29-WL-02	5/13/93	0 - 0	Explosives, SVOC
29WL06	29WL06(CONTS)	4/30/95	0 - 0	Explosives[d], Metals [c]
29WL09	29WL09(CONTS)	4/29/95	0 - 0	Explosives[d], Metals [c]
29WL10	29WL10(CONTS)	4/29/95	0 - 0	Explosives[d], Metals [c]
29WL11	29WL11(CONTS)	4/29/95	0 - 0	Explosives[d], Metals [c]
32SB01	32SB01(0-2)	6/3/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
32SB02	32SB02(0-2)	5/31/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
32SB03	32SB03(0-2)	5/25/93	0 - 2	Explosives, General Chemistry, Metals[c], Pest/PCB, SVOC, VOC
32SB04	32SB04(0-2)	6/3/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
32SB05	32SB05(0-2)	5/29/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
32SB06	32SB06(0-2)	6/1/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
32SB07	32SB07(0-2)	5/18/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
32SB07	32SB07(0-2)QC	5/18/93	0 - 2	General Chemistry, Metals[c], SVOC
32SB08	32SB08(0-2)	5/25/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
32SB09	32SB09(0-2)	6/4/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
32SB10	32SB10(0-2)	6/4/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
32SB11	32SB11(0-2)	5/26/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
32SB12	32SB12(0-2)	5/25/93	0 - 2	Explosives, General Chemistry, Metals[c], Pest/PCB, SVOC, VOC
32SB13	32SB13(0-2)	6/3/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
32SD05	32SD05(0.5)	4/30/93	0 - 0.5	Explosives, General Chemistry, Metals[c], SVOC, VOC

Table 6-2
Sample Summary for Total Soil
Industrial Sub-Area

Location	Sample No [a]	Date	Depth (ft bgs)	Analyses
32SD06	32SD06(0.5)	4/30/93	0 - 0.5	Explosives, General Chemistry, Metals[c], SVOC, VOC
32SD07	32SD07(0.5)	4/30/93	0 - 0.5	Explosives, General Chemistry, Metals[c], SVOC, VOC
32SD11	32SD11(000.0)	2/20/95	0 - 0	Explosives[d], Metals
32SD12	32SD12(000.0)	2/20/95	0 - 0	Explosives[d], Metals
32SD13	32SD13(000.0)	2/20/95	0 - 0	Explosives[d], Metals [e]
32SD13	32SD13(000.0)QC	2/20/95	0 - 0	Explosives[d], Metals [e]
32SD17	32SD17-981008	10/8/98	0 - 0	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
32SD17	32SD17QC	10/8/98	0 - 0	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
32SD18	32SD18-981008	10/8/98	0 - 0	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
32SS01	32SS01(0-0.5)	7/26/98	0 - 0.5	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
32SS01	32SS01(0-0.5)QC	7/26/98	0 - 0.5	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
32SS01	32SS01(1-3)	7/26/98	1 - 3	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
32SS02	32SS02(0-0.5)	7/26/98	0 - 0.5	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
32SS02	32SS02(1-3)	7/26/98	1 - 3	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
32SS03	32SS03(0-0.5)	7/26/98	0 - 0.5	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
32SS03	32SS03(1-3)	7/26/98	1 - 3	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
32SS04	32SS04(0-0.5)	7/26/98	0 - 0.5	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
32SS04	32SS04(1-3)	7/26/98	1 - 3	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
32SS04	32SS04(1-3)QC	7/26/98	1 - 3	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
32WL01	32WL01	5/17/93	0 - 0	Explosives
32WL01	32WL01(2.5-3.0)	5/17/93	2.5 - 3	Explosives, VOC
32WL04	32WL04(002.0)	5/2/95	2 - 2	Explosives[d], General Chemistry, Metals[c]
35ASB03	35ASB03(0-0.5)	7/26/98	0 - 0.5	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
35ASB03	35ASB03(0-0.5)QC	7/26/98	0 - 0.5	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
35ASB03	35ASB03(1-3)	7/26/98	1 - 3	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
35ASB05	35ASB05(0-0.5)	7/26/98	0 - 0.5	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
35ASB05	35ASB05(1-3)	7/26/98	1 - 3	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
35ASS01	35ASS01(0-0.5)	7/26/98	0 - 0.5	SVOC
35ASS02	35ASS02(0-0.5)	7/26/98	0 - 0.5	SVOC
35ASS04	35ASS04(0-0.5)	7/26/98	0 - 0.5	SVOC
35ASS06	35ASS06(0-0.5)	7/26/98	0 - 0.5	SVOC
35BSB01	35BSB01(0-0.5)	7/27/98	0 - 0.5	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
35BSB01	35BSB01(0-0.5)QC	7/27/98	0 - 0.5	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
35BSB01	35BSB01(1-3)	7/27/98	1 - 3	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
35CSB01	35CSB01(0-0.5)	7/27/98	0 - 0.5	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
35CSB01	35CSB01(0-0.5)QC	7/27/98	0 - 0.5	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
35CSB01	35CSB01(1-3)	7/27/98	1 - 3	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
35CSB02	35CSB02(0-0.5)	6/1/00	0 - 0.5	Perchlorate
35CSB02	35CSB02(1-2)	6/1/00	1 - 2	Perchlorate
35CSB03	35CSB03(0-0.5)	6/1/00	0 - 0.5	Perchlorate
35CSB03	35CSB03(1-2)	6/1/00	1 - 2	Perchlorate
46SB01	46SB01(0-0.5)	7/27/98	0 - 0.5	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
46SB01	46SB01(1-3)	7/27/98	1 - 3	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
46SB02	46SB02(0-0.5)	7/27/98	0 - 0.5	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
46SB02	46SB02(1-3)	7/27/98	1 - 3	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
46SB03	46SB03(0-0.5)	7/27/98	0 - 0.5	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
46SB03	46SB03(0-0.5)QC	7/27/98	0 - 0.5	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
46SB03	46SB03(1-3)	7/27/98	1 - 3	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
46SD01	46SD01-981109	11/9/98	0 - 0	Explosives, General Chemistry, Metals, SVOC, VOC
46SD01	46SD01-981203	12/3/98	0 - 0	Pest/PCB
46SD02	46SD02-981109	11/9/98	0 - 0	Dioxin/Furans, Explosives, General Chemistry, Metals, Pest/PCB, SVOC, VOC
46SD05	46SD05-981110	11/10/98	0 - 0	Dioxin/Furans, Explosives, General Chemistry, Metals, Pest/PCB, SVOC, VOC
46SD05	46SD05QC	11/10/98	0 - 0	Dioxin/Furans, Explosives, General Chemistry, Metals, Pest/PCB, SVOC, VOC
46SD06	46SD06-981110	11/10/98	0 - 0	Explosives, General Chemistry, Metals, Pest/PCB, SVOC, VOC
46SD06	46SD06-981203	12/3/98	0 - 0	Pest/PCB
47SB01	47SB01(1-3)	7/27/98	1 - 3	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
47SB01	C-47SB01(0-0.5)-9807	7/27/98	0 - 0.5	Explosives, Metals, Pest/PCB, SVOC, VOC
47SB01	C-47SB01(0-0.5)-9812	12/1/98	0 - 0.5	Dioxin/Furans
47SB02	47SB02(1-3)	7/27/98	1 - 3	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
47SB02	C-47SB02(0-0.5)-9807	7/27/98	0 - 0.5	Explosives, Metals, Pest/PCB, SVOC, VOC
47SB02	C-47SB02(0-0.5)-9812	12/1/98	0 - 0.5	Dioxin/Furans
47SB03	47SB03(1-3)	7/27/98	1 - 3	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
47SB03	47SB03(1-3)QC	7/27/98	1 - 3	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
47SB03	C-47SB03(0-0.5)-9807	7/27/98	0 - 0.5	Explosives, Metals, Pest/PCB, SVOC, VOC
47SB03	C-47SB03(0-0.5)-9812	12/1/98	0 - 0.5	Dioxin/Furans
47SB04	47SB04(0-0.5)	5/30/00	0 - 0.5	Perchlorate
47SB04	47SB04(1-2)	5/30/00	1 - 2	Perchlorate
47SB05	47SB05(0-0.5)	5/30/00	0 - 0.5	Perchlorate
47SB05	47SB05(1-2)	5/30/00	1 - 2	Perchlorate
47SB06	47SB06(0-0.5)	5/31/00	0 - 0.5	Perchlorate
47SB06	47SB06(1-2)	5/31/00	1 - 2	Perchlorate
47SB08	47SB08 (0-0.5)	5/31/00	0 - 0.5	Perchlorate
47SB08	47SB08 (1-2)	5/31/00	1 - 2	Perchlorate
47SB09	47SB09(0-0.5)	5/31/00	0 - 0.5	Perchlorate
47SB09	47SB09(1-2)	5/31/00	1 - 2	Perchlorate
47SB10	47SB10(0-0.5)	5/31/00	0 - 0.5	Perchlorate
47SB10	47SB10(1-2)	5/31/00	1 - 2	Perchlorate
47SB11	47SB11(0-0.5)	6/1/00	0 - 0.5	Perchlorate
47SB11	47SB11(0-0.5)QC	6/1/00	0 - 0.5	Perchlorate
47SB11	47SB11(1-2)	6/1/00	1 - 2	Perchlorate

Table 6-2
Sample Summary for Total Soil
Industrial Sub-Area

Location	Sample No [a]	Date	Depth (ft bgs)	Analyses
47SB12	47SB12(0-0.5)	6/2/00	0 - 0.5	Perchlorate
47SB12	47SB12(0-0.5)QC	6/2/00	0 - 0.5	Perchlorate
47SB13	47SB13(0-0.5)	6/2/00	0 - 0.5	Perchlorate
47SB13	47SB13(1-2)	6/2/00	1 - 2	Perchlorate
47SB14	47SB14(0-0.5)	6/2/00	0 - 0.5	Perchlorate
47SB14	47SB14(1-2)	6/2/00	1 - 2	Perchlorate
47SB15	47SB15(0-0.5)	6/3/00	0 - 0.5	Perchlorate
47SB15	47SB15(1-2)	6/3/00	1 - 2	Perchlorate
47SB16	47SB16(0-0.5)	6/2/00	0 - 0.5	Perchlorate
47SB16	47SB16(1-2)	6/2/00	1 - 2	Perchlorate
47SB17	47SB17(0-0.5)	6/3/00	0 - 0.5	Perchlorate
47SB17	47SB17(0-0.5)QC	6/3/00	0 - 0.5	Perchlorate
47SB18	47SB18(0-0.5)	6/3/00	0 - 0.5	Perchlorate
47SB19	47SB19(0-0.5)	6/2/00	0 - 0.5	Perchlorate
47SB19	47SB19(1-2)	6/2/00	1 - 2	Perchlorate
47SB20	47SB20(0-0.5)	6/2/00	0 - 0.5	Perchlorate
47SB20	47SB20(1-2)	6/2/00	1 - 2	Perchlorate
47SB21	47SB21(0-0.5)	6/3/00	0 - 0.5	Perchlorate
47SB21	47SB21(1-2)	6/3/00	1 - 2	Perchlorate
47SB22	47SB22(0-0.5)	6/3/00	0 - 0.5	Perchlorate
47SB22	47SB22(0-0.5)QC	6/3/00	0 - 0.5	Perchlorate
47SB22	47SB22(1-2)	6/3/00	1 - 2	Perchlorate
47SB23	47SB23(0-0.5)	6/3/00	0 - 0.5	Perchlorate
47SB23	47SB23(1-2)	6/3/00	1 - 2	Perchlorate
47SB24	47SB24(0-0.5)	6/4/00	0 - 0.5	Perchlorate
47SB24	47SB24(1-2)	6/4/00	1 - 2	Perchlorate
47SB25	47SB25(0-0.5)	6/4/00	0 - 0.5	Perchlorate
47SB25	47SB25(1-2)	6/4/00	1 - 2	Perchlorate
47SB26	47SB26(0-0.5)	6/4/00	0 - 0.5	Perchlorate
47SB26	47SB26(1-2)	6/4/00	1 - 2	Perchlorate
47SB27	47SB27(0-0.5)	6/4/00	0 - 0.5	Perchlorate
47SB27	47SB27(0-0.5)QC	6/4/00	0 - 0.5	Perchlorate
47SB27	47SB27(1-2)	6/4/00	1 - 2	Perchlorate
47SB28	47SB28(0-0.5)	6/4/00	0 - 0.5	Perchlorate
47SB28	47SB28(1-2)	6/4/00	1 - 2	Perchlorate
47SB29	47SB29(0-0.5)	6/4/00	0 - 0.5	Perchlorate
47SB29	47SB29(1-2)	6/4/00	1 - 2	Perchlorate
47SB30	47SB30(0-0.5)	6/5/00	0 - 0.5	Perchlorate
47SB30	47SB30(0-0.5)QC	6/5/00	0 - 0.5	Perchlorate
47SB30	47SB30(1-2)	6/5/00	1 - 2	Perchlorate
47SB31	47SB31(0-0.5)	6/5/00	0 - 0.5	Perchlorate
47SB31	47SB31(1-2)	6/5/00	1 - 2	Perchlorate
47SB32	47SB32(0-0.5)	6/2/00	0 - 0.5	Perchlorate
47SB33	47SB33(0-0.5)	6/3/00	0 - 0.5	Perchlorate
47SB33	47SB33(1-2)	6/3/00	1 - 2	Perchlorate
48SB01	48SB01(0-0.5)	7/28/98	0 - 0.5	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
48SB01	48SB01(1-3)	7/28/98	1 - 3	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
48SB01	48SB01(1-3)QC	7/28/98	1 - 3	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
49SB01	49SB01(0-0.5)	12/3/00	0 - 0.5	General Chemistry, Metals
49SB01	49SB01(1-2)	12/3/00	1 - 2	General Chemistry, Metals
49SB01	49SB01(1-2)QC	12/3/00	1 - 2	General Chemistry, Metals
49SB02	49SB02(0-0.5)	12/3/00	0 - 0.5	General Chemistry, Metals
49SB02	49SB02(1-2)	12/3/00	1 - 2	General Chemistry, Metals
49SB03	49SB03(0-0.5)	12/3/00	0 - 0.5	General Chemistry, Metals
49SB03	49SB03(1-2)	12/3/00	1 - 2	General Chemistry, Metals
49SB04	49SB04(0-0.5)	12/3/00	0 - 0.5	General Chemistry, Metals
49SB04	49SB04(1-2)	12/3/00	1 - 2	General Chemistry, Metals
49SB05	49SB05(0-0.5)	12/3/00	0 - 0.5	General Chemistry, Metals
49SB05	49SB05(1-2)	12/3/00	1 - 2	General Chemistry, Metals
49SB07	49SB07(0-0.5)	12/3/00	0 - 0.5	General Chemistry, Metals
49SB07	49SB07(0-0.5)QC	12/3/00	0 - 0.5	General Chemistry, Metals
49SB07	49SB07(1-2)	12/3/00	1 - 2	General Chemistry, Metals
49SB08	49SB08(0-0.5)	12/3/00	0 - 0.5	General Chemistry, Metals
49SB08	49SB08(1-2)	12/3/00	1 - 2	General Chemistry, Metals
49SB09	49SB09(0-0.5)	12/3/00	0 - 0.5	General Chemistry, Metals
49SB09	49SB09(1-2)	12/3/00	1 - 2	General Chemistry, Metals
49SB09	49SB09(1-2)QC	12/3/00	1 - 2	General Chemistry, Metals
49SB10	49SB10(0-0.5)	12/3/00	0 - 0.5	General Chemistry, Metals
49SB10	49SB10(1-2)	12/3/00	1 - 2	General Chemistry, Metals
49SB11	49SB11(0-0.5)	12/3/00	0 - 0.5	General Chemistry, Metals
49SB11	49SB11(1-2)	12/3/00	1 - 2	General Chemistry, Metals
49SB12	49SB12(0-0.5)	12/2/00	0 - 0.5	General Chemistry, Metals
49SB12	49SB12(1-2)	12/2/00	1 - 2	General Chemistry, Metals
49SB13	49SB13(0-0.5)	12/2/00	0 - 0.5	General Chemistry, Metals
49SB13	49SB13(1-2)	12/2/00	1 - 2	General Chemistry, Metals
49SB14	49SB14(0-0.5)	12/2/00	0 - 0.5	General Chemistry, Metals
49SB14	49SB14(1-2)	12/2/00	1 - 2	General Chemistry, Metals
49SB15	49SB15(0-0.5)	12/2/00	0 - 0.5	General Chemistry, Metals
49SB15	49SB15(1-2)	12/2/00	1 - 2	General Chemistry, Metals
49SB16	49SB16(0-0.5)	12/2/00	0 - 0.5	General Chemistry, Metals
49SB16	49SB16(1-2)	12/2/00	1 - 2	General Chemistry, Metals

Table 6-2
Sample Summary for Total Soil
Industrial Sub-Area

Location	Sample No [a]	Date	Depth (ft bgs)	Analyses
49SB16	49SB16(1-2)QC	12/2/00	1 - 2	General Chemistry, Metals
49SB17	49SB17(0-0.5)	12/2/00	0 - 0.5	General Chemistry, Metals
49SB17	49SB17(1-2)	12/2/00	1 - 2	General Chemistry, Metals
49SB18	49SB18(0-0.5)	12/2/00	0 - 0.5	General Chemistry, Metals
49SB18	49SB18(1-2)	12/2/00	1 - 2	General Chemistry, Metals
49SB19	49SB19(0-0.5)	12/2/00	0 - 0.5	General Chemistry, Metals
49SB19	49SB19(1-2)	12/2/00	1 - 2	General Chemistry, Metals
49SB20	49SB20(0-0.5)	12/2/00	0 - 0.5	General Chemistry, Metals
49SB20	49SB20(1-2)	12/2/00	1 - 2	General Chemistry, Metals
49SB21	49SB21(0-0.5)	12/2/00	0 - 0.5	General Chemistry, Metals
49SB21	49SB21(1-2)	12/2/00	1 - 2	General Chemistry, Metals
49SB22	49SB22(0-0.5)	12/2/00	0 - 0.5	General Chemistry, Metals
49SB22	49SB22(0-0.5)QC	12/2/00	0 - 0.5	General Chemistry, Metals
49SB22	49SB22(1-2)	12/2/00	1 - 2	General Chemistry, Metals
49SB23	49SB23(0-0.5)	12/2/00	0 - 0.5	General Chemistry, Metals
49SB23	49SB23(1-2)	12/2/00	1 - 2	General Chemistry, Metals
49SB24	49SB24(0-0.5)	12/2/00	0 - 0.5	General Chemistry, Metals
49SB24	49SB24(1-2)	12/2/00	1 - 2	General Chemistry, Metals
49SB25	49SB25(0-0.5)	12/2/00	0 - 0.5	General Chemistry, Metals
49SB25	49SB25(1-2)	12/2/00	1 - 2	General Chemistry, Metals
49SB26	49SB26(0-0.5)	12/2/00	0 - 0.5	General Chemistry, Metals
49SB26	49SB26(1-2)	12/2/00	1 - 2	General Chemistry, Metals
49SB27	49SB27(0-0.5)	12/2/00	0 - 0.5	General Chemistry, Metals
49SB27	49SB27(1-2)	12/2/00	1 - 2	General Chemistry, Metals
49SB28	49SB28(0-0.5)	12/2/00	0 - 0.5	General Chemistry, Metals
49SB28	49SB28(1-2)	12/2/00	1 - 2	General Chemistry, Metals
49SB30	49SB30(0-0.5)	12/2/00	0 - 0.5	General Chemistry, Metals
49SB30	49SB30(0-0.5)QC	12/2/00	0 - 0.5	General Chemistry, Metals
49SB30	49SB30(1-2)	12/2/00	1 - 2	General Chemistry, Metals
49SB31	49SB31(0-0.5)	12/3/00	0 - 0.5	General Chemistry, Metals
49SB31	49SB31(1-2)	12/3/00	1 - 2	General Chemistry, Metals
49SB32	49SB32(0-0.5)	12/3/00	0 - 0.5	General Chemistry, Metals
49SB32	49SB32(0-0.5)QC	12/3/00	0 - 0.5	General Chemistry, Metals
49SB32	49SB32(1-2)	12/3/00	1 - 2	General Chemistry, Metals
49SB33	49SB33(0-0.5)	12/3/00	0 - 0.5	General Chemistry, Metals
49SB33	49SB33(1-2)	12/3/00	1 - 2	General Chemistry, Metals
49SB34	49SB34(0-0.5)	12/7/00	0 - 0.5	Dioxin/Furans, Explosives, General Chemistry, Metals, Perchlorate, Pest/PCB, SVOC, VOC
49SB34	49SB34(1-3)	12/7/00	1 - 3	Dioxin/Furans, Explosives, General Chemistry, Metals, Perchlorate, Pest/PCB, SVOC, VOC
49SB35	49SB35(0-0.5)	12/7/00	0 - 0.5	Dioxin/Furans, Explosives, General Chemistry, Metals, Perchlorate, Pest/PCB, SVOC, VOC
49SB35	49SB35(0-0.5)QC	12/7/00	0 - 0.5	Dioxin/Furans, Explosives, General Chemistry, Metals, Perchlorate, Pest/PCB, SVOC, VOC
49SB35	49SB35(1-3)	12/7/00	1 - 3	Dioxin/Furans, Explosives, General Chemistry, Metals, Perchlorate, Pest/PCB, SVOC, VOC
49SB36	49SB36(0-0.5)	12/7/00	0 - 0.5	Dioxin/Furans, Explosives, General Chemistry, Metals, Perchlorate, Pest/PCB, SVOC, VOC
49SB36	49SB36(1-3)	12/7/00	1 - 3	Dioxin/Furans, Explosives, General Chemistry, Metals, Perchlorate, Pest/PCB, SVOC, VOC
50SB06	50SB06(0-0.5)	7/28/98	0 - 0.5	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
50SB06	50SB06(0-0.5)QC	7/28/98	0 - 0.5	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
50SB06	50SB06(1-3)	7/28/98	1 - 3	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
50SB08	50SB08(0-0.5)	5/30/00	0 - 0.5	Perchlorate
50SB08	50SB08(0-0.5)QC	5/30/00	0 - 0.5	Perchlorate
50SB08	50SB08(1-2)	5/30/00	1 - 2	Perchlorate
50SB09	50SB09(0-0.5)	5/30/00	0 - 0.5	Perchlorate
50SB09	50SB09(1-2)	5/30/00	1 - 2	Perchlorate
50SS01	LH50SS01-960220	2/20/96	0 - 0	Explosives[d]
50SS02	LH50SS02-960220	2/20/96	0 - 0	Explosives[d]
50SS03	LH50SS03-960220	2/20/96	0 - 0	Explosives[d]
50SS05	LH50SS05-960220	2/20/96	0 - 0	Explosives[d]
50SS07	50SS07(0-0.5)	7/28/98	0 - 0.5	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
52SS04	LH52SS04-960219	2/19/96	0 - 0	Explosives[d]
52SS05	LH52SS05-960219	2/19/96	0 - 0	Explosives[d]
60SB01	LH60SB01(1-3)	10/14/95	1 - 3	Pest/PCB
60SB02	LH60SB02(1-3)	10/14/95	1 - 3	Pest/PCB
60SB03	LH60SB03(1-3)	10/14/95	1 - 3	Pest/PCB
60SB06	LH60SB06(1-3)	10/14/95	1 - 3	Pest/PCB
60SB07	LH60SB07(1-3)	10/14/95	1 - 3	Pest/PCB
60SB08	LH60SB08(1-3)	10/15/95	1 - 3	Pest/PCB
60SB11	LH60SB11(1-3)	10/15/95	1 - 3	Pest/PCB
60SB12	LH60SB12(1-3)	10/15/95	1 - 3	Pest/PCB
60SB13	LH60SB13(1-3)	10/15/95	1 - 3	Pest/PCB
60SB22	60SB22(0-0.5)	7/28/98	0 - 0.5	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
60SB22	60SB22(0-0.5)QC	7/28/98	0 - 0.5	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
60SB22	60SB22(1-3)	7/28/98	1 - 3	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
60SS04	LH60SS04-951014	10/14/95	0 - 0	Pest/PCB
60SS05	LH60SS05-951014	10/14/95	0 - 0	Pest/PCB
60SS09	LH60SS09-951014	10/14/95	0 - 0	Pest/PCB
60SS10	LH60SS10-951014	10/14/95	0 - 0	Pest/PCB
60SS10	LH60SS10-951014QC	10/14/95	0 - 0	Pest/PCB
60SS11	60SS11(0-0.5)	7/28/98	0 - 0.5	Pesticides
60SS11	LH60SS11-951015	10/15/95	0 - 0	Pest/PCB
60SS12	60SS12(0-0.5)	7/28/98	0 - 0.5	Pesticides
60SS12	60SS12(0-0.5)QC	7/28/98	0 - 0.5	Pesticides
60SS12	LH60SS12-951015	10/15/95	0 - 0	Pest/PCB

Table 6-2
Sample Summary for Total Soil
Industrial Sub-Area

Location	Sample No [a]	Date	Depth (ft bgs)	Analyses
60SS13	60SS13(0-0.5)	7/28/98	0 - 0.5	Pesticides
60SS13	LH60SS13-951015	10/15/95	0 - 0	Pest/PCB
60SS14	60SS14(0-0.5)	7/28/98	0 - 0.5	Pesticides
60SS14	LH60SS14-951015	10/15/95	0 - 0	Pest/PCB
60SS15	60SS15(0-0.5)	7/28/98	0 - 0.5	Pesticides
60SS15	LH60SS15-951015	10/15/95	0 - 0	Pest/PCB
60SS15	LH60SS15-951015QC	10/15/95	0 - 0	Pest/PCB
60SS16	60SS16(0-0.5)	7/28/98	0 - 0.5	Pesticides
60SS17	60SS17(0-0.5)	7/28/98	0 - 0.5	Pesticides
60SS18	60SS18(0-0.5)	7/28/98	0 - 0.5	Pesticides
60SS19	60SS19(0-0.5)	7/28/98	0 - 0.5	Pesticides
60SS20	60SS20(0-0.5)	7/28/98	0 - 0.5	Pesticides
60SS21	60SS21(0-0.5)	7/28/98	0 - 0.5	Pesticides
60SS23	60SS23(0-0.5)	7/28/98	0 - 0.5	Pesticides
60SS24	60SS24(0-0.5)	7/28/98	0 - 0.5	Pesticides
60SS25	60SS25(0-0.5)	7/28/98	0 - 0.5	Pesticides
60SS26	60SS26(0-0.5)	7/28/98	0 - 0.5	Pesticides
67SB01	67SB01(0-0.5)	12/14/00	0 - 0.5	Dioxin/Furans, Explosives, Metals, SVOC, VOC
67SB01	67SB01(1-3)	12/6/00	1 - 3	Explosives, Metals, SVOC, VOC
67SB02	67SB02(0-0.5)	12/14/00	0 - 0.5	Dioxin/Furans, Explosives, Metals, SVOC, VOC
67SB02	67SB02(1-2)	12/6/00	1 - 2	Explosives, Metals, SVOC, VOC
67SB03	67SB03(0-0.5)	12/7/00	0 - 0.5	Explosives, Metals, SVOC, VOC
67SB03	67SB03(1-3)	12/7/00	1 - 3	Explosives, Metals, SVOC, VOC
CCSD01	CCSD01	9/17/98	0 - 0	Dioxin/Furans, Explosives, General Chemistry, Metals, Pest/PCB, SVOC, VOC
FWS-016	C-SS-016	8/27/02	0 - 0.5	Metals, Pesticides, SVOC
FWS-021	C-SS-021	10/2/02	0 - 0.5	Metals, Pesticides, SVOC
FWS-022	C-SS-022	10/2/02	0 - 0.5	Dioxin/Furans, Metals, Pesticides, SVOC
FWS-025	C-SS-025	10/2/02	0 - 0.5	Metals, Pesticides, SVOC
FWS-026	C-SS-026	10/2/02	0 - 0.5	Metals, Pesticides, SVOC
FWS-029	C-SS-029	10/2/02	0 - 0.5	Metals, Pesticides, SVOC
FWS-035	C-SS-035	9/25/02	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-036	C-SS-036	9/25/02	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-038	C-SS-038	9/25/02	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-112	CLNWR112	9/9/03	0 - 0.5	Dioxin/Furans, Metals, Pest/PCB, SVOC
FWS-113	CLNWR113	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-113	CL113DUP	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-114	CLNWR114	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-115	CLNWR115	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-116	CLNWR116	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-117	CLNWR117	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-121	CLNWR121	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-122	CLNWR122	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-125	CLNWR125	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-126	CLNWR126	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-128	CLNWR128	9/9/03	0 - 0.5	Dioxin/Furans, Metals, Pest/PCB, SVOC
FWS-129	CLNWR129	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-130	CLNWR130	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-131	CLNWR131	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-131	CL131DUP	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-132	CLNWR132	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-133	CLNWR133	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-134	CLNWR134	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-160	CLNWR160	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-160	CL160DUP	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-161	CLNWR161	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-164	CLNWR164	9/9/03	0 - 0.5	Dioxin/Furans, Metals, Pest/PCB, SVOC
FWS-165	CLNWR165	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-166	CLNWR166	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-167	CLNWR167	9/9/03	0 - 0.5	Dioxin/Furans, Metals, Pest/PCB, SVOC
FWS-168	CLNWR168	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-176	CLNWR176	9/9/03	0 - 0.5	Dioxin/Furans, Metals, Pest/PCB, SVOC
FWS-177	CLNWR177	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-178	CLNWR178	9/9/03	0 - 0.5	Dioxin/Furans, Metals, Pest/PCB, SVOC
FWS-189	CLNWR189	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-190	CLNWR190	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-191	CLNWR191	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-192	CLNWR192	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-193	CLNWR193	9/9/03	0 - 0.5	Dioxin/Furans, Metals, Pest/PCB, SVOC
FWS-194	CLNWR194	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-194	CL194DUP	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-195	CLNWR195	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-196	CLNWR196	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-220	CLNWR220	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-221	CLNWR221	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-222	CLNWR222	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-229	CLNWR229	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-230	CLNWR230	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-231	CL231DUP	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-231	CLNWR231	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-233	CLNWR233	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-234	CLNWR234	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC

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Table 6-2
Sample Summary for Total Soil
Industrial Sub-Area

Location	Sample No [a]	Date	Depth (ft bgs)	Analyses
HOSB01	HOSB01(0-0.5)	12/4/00	0 - 0.5	TPH
HOSB02	HOSB02(0-0.5)	12/4/00	0 - 0.5	TPH
HOSB03	HOSB03(0-0.5)	12/4/00	0 - 0.5	TPH
HOSB04	HOSB04(0-0.5)	12/6/00	0 - 0.5	TPH
HOSB05	HOSB05(0-0.5)	12/6/00	0 - 0.5	TPH
HOSB06	HOSB06(0-0.5)	12/4/00	0 - 0.5	TPH
HOSB07	HOSB07(0-0.5)	12/5/00	0 - 0.5	TPH
HOSB08	HOSB08(0-0.5)	12/4/00	0 - 0.5	TPH
HOSB09	HOSB09(0-0.5)	12/5/00	0 - 0.5	TPH
HOSB10	HOSB10(0-0.5)	12/4/00	0 - 0.5	TPH
HOSB11	HOSB11(0-0.5)	12/5/00	0 - 0.5	TPH
HOSB12	HOSB12(0-0.5)	12/5/00	0 - 0.5	TPH
HOSB13	HOSB13(0-0.5)	12/5/00	0 - 0.5	TPH
HOSB14	HOSB14(0-0.5)	12/5/00	0 - 0.5	TPH
HOSB15	HOSB15(0-0.5)	12/5/00	0 - 0.5	TPH
HOSB19	HOSB19(0-0.5)	12/7/00	0 - 0.5	TPH
HOSB20	HOSB20(0-0.5)	12/7/00	0 - 0.5	TPH
HOSB21	HOSB21(0-0.5)	12/7/00	0 - 0.5	TPH
HOSB21	HOSB21(0-0.5)QC	12/7/00	0 - 0.5	TPH
HOSB22	HOSB22(0-0.5)	12/7/00	0 - 0.5	TPH
HOSB23	HOSB23(0-0.5)	12/7/00	0 - 0.5	TPH
HOSB24	HOSB24(0-0.5)	12/7/00	0 - 0.5	TPH
LAP-021	LAP-0210	7/10/00	0 - 0.5	Explosives, SVOC
LAP-021	LAP-0211	7/10/00	0 - 0.5	Explosives, SVOC
LAP-021	LAP-021A	7/10/00	0 - 0.5	Explosives, Metals, Perchlorate, SVOC
LAP-021	LAP-021B	7/10/00	1 - 1.5	Explosives, Metals, Perchlorate, SVOC, VOC
LAP-0210	LAP-0210	7/11/00	0 - 0.5	Metals, Perchlorate
LAP-0211	LAP-0211	7/11/00	0 - 0.5	Metals, Perchlorate
LAP-022	LAP-022A	7/10/00	0 - 0.5	Explosives, Metals, Perchlorate, SVOC
LAP-022	LAP-022B	7/10/00	1 - 1.5	Explosives, Metals, Perchlorate, SVOC, VOC
LAP-023	LAP-023A	7/10/00	0 - 0.5	Explosives, Metals, Perchlorate, SVOC
LAP-023	LAP-023B-FD	7/10/00	0 - 0.5	Explosives
LAP-023	LAP-023B	7/10/00	1 - 1.5	Explosives, Metals, Perchlorate, SVOC, VOC
LAP-024	LAP-024A	7/10/00	0 - 0.5	Explosives, Metals, Perchlorate, SVOC
LAP-024	LAP-024B	7/10/00	1 - 1.5	Explosives, Metals, Perchlorate, SVOC, VOC
LAP-025	LAP-025A	7/10/00	0 - 0.5	Metals, Perchlorate, SVOC
LAP-025	LAP-025B	7/10/00	1 - 1.5	Metals, Perchlorate, SVOC, VOC
LAP-026	LAP-026A	7/10/00	0 - 0.5	Explosives, Metals, Perchlorate, SVOC
LAP-026	LAP-026B	7/10/00	1 - 1.5	Explosives, Metals, Perchlorate, SVOC, VOC
LAP-027	LAP-027A	7/10/00	0 - 0.5	Explosives, Metals, Perchlorate, SVOC
LAP-027	LAP-027B	7/10/00	1 - 1.5	Explosives, Metals, Perchlorate, SVOC, VOC
LAP-028	LAP-028A	7/10/00	0 - 0.5	Explosives, Metals, Perchlorate, SVOC
LAP-028	LAP-028B	7/10/00	1 - 1.5	Explosives, Metals, Perchlorate, SVOC, VOC
LH-DL063-01	LH-DL063-01	8/5/93	1 - 1.5	Explosives, Metals, SVOC, VOC
LH-DL064-01	LH-DL064-01	8/5/93	2 - 2.5	Explosives, Metals, SVOC, VOC
LH-DL065-01	LH-DL065-01	8/5/93	1.5 - 2	Explosives, Metals, SVOC, VOC
LH-DL065-01	LH-DL065-01 QC	8/5/93	1.5 - 2	Explosives, Metals, SVOC, VOC
LH-DL072-01	LH-DL072-01	8/4/93	2 - 2.5	Metals, SVOC, VOC
LH-DL27-01	LH-DL27-01	6/24/93	1.5 - 2.5	Explosives, Metals, SVOC, VOC
LH-DL29-01	LH-DL29-01	6/25/93	2 - 3	Explosives, Metals, SVOC, VOC
LH-DL44-01	LH-DL44-01	7/10/93	2.1 - 2.8	Explosives, Metals, SVOC, VOC
LH-DL45-01	LH-DL45-01	7/10/93	2.3 - 3	Explosives, Metals, SVOC, VOC
LH-DL47-01	LH-DL47-01	7/9/93	0.5 - 1.5	Explosives, Metals, SVOC, VOC
LH-DL50-01	LH-DL50-01	7/11/93	2 - 2.9	Explosives, Metals, SVOC, VOC
LH-DL52-01	LH-DL52-01	8/3/93	1.3 - 1.7	Metals, SVOC, VOC
LH-DL53-01	LH-DL53-01	7/13/93	0 - 0	Explosives, Metals, SVOC, VOC
LH-DL58-01	LH-DL58-01	6/26/93	2.1 - 2.9	Explosives, Metals, SVOC, VOC
LH-DL61-01	LH-DL61-01	8/6/93	2 - 3	Explosives, Metals, SVOC, VOC
LH-DL69-01	LH-DL69-01	6/26/93	2.5 - 3	Explosives, Metals, SVOC, VOC
LH-DL71-01	LH-DL71-01	7/24/93	2 - 3	Explosives, Metals, SVOC, VOC
LH-DL723-01	LH-DL723-01	6/26/93	1 - 2	Explosives, Metals, SVOC, VOC
LH-DL73-01	LH-DL73-01	6/26/93	2 - 2.7	Explosives, Metals, SVOC, VOC
LH-DL74-01	LH-DL74-01	6/26/93	2 - 2.7	Explosives, Metals, SVOC, VOC
LH-DL75-01	LH-DL75-01	6/26/93	2 - 2.5	Explosives, Metals, SVOC
LH-DL76-01	LH-DL76-01	6/26/93	2 - 2.5	Explosives, Metals, SVOC, VOC
LH-DL77-01	LH-DL77-01	6/26/93	2 - 2.5	Explosives, Metals, SVOC, VOC
LH-DL85-01	LH-DL85-01	6/26/93	2.5 - 3	Explosives, Metals, SVOC, VOC
LH-DL91	LH-DL91	7/23/93	2.5 - 3	Explosives, Metals, SVOC, VOC
LH-DL92-01	LH-DL92-01	7/23/93	2.5 - 3	Explosives, Metals, SVOC, VOC
LH-DL93-01	LH-DL93-01	7/27/93	2.5 - 3	Explosives, Metals, SVOC, VOC
LH-DL95-01	LH-DL95-01	6/26/93	2 - 2.5	Explosives, Metals, SVOC, VOC
LH-S01-01	LH-S01-01_1	6/26/93	0.5 - 1.5	Metals, SVOC, VOC
LH-S01-02	LH-S01-02_1	6/26/93	0.5 - 1.5	Metals, SVOC, VOC
LH-S017-01	LH-S017-01_1	8/8/93	0.5 - 1.5	Explosives, Metals, SVOC, VOC
LH-S017-01	LH-S017-01 QC	8/8/93	0.5 - 1.5	Explosives (2,4-Dinitrotoluene, 2,6-Dinitrotoluene), Metals, SVOC, VOC
LH-S017-01	LH-S017-01_2	8/8/93	2.5 - 3	Explosives, Metals, SVOC, VOC
LH-S017-02	LH-S017-02_1	8/8/93	0.5 - 1	Explosives, Metals, SVOC, VOC
LH-S017-02	LH-S017-02_2	8/8/93	2.5 - 3	Explosives, Metals, SVOC, VOC
LH-S018-01	LH-S018-01_1	8/8/93	0.5 - 1.1	Explosives, Metals, SVOC, VOC
LH-S018-01	LH-S018-01_2	8/8/93	1.1 - 1.6	Explosives, Metals, SVOC, VOC
LH-S02-01	LH-S02-01_1	6/26/93	0.5 - 2.5	Metals, SVOC, VOC

Table 6-2
Sample Summary for Total Soil
Industrial Sub-Area

Location	Sample No [a]	Date	Depth (ft bgs)	Analyses
LH-S02-02	LH-S02-02_1	6/26/93	0.5 - 2.5	Metals, SVOC, VOC
LH-S021-01	LH-S021-01_1	8/6/93	1 - 1.5	Explosives, Metals, SVOC, VOC
LH-S021-01	LH-S021-01 QC	8/6/93	1 - 1.5	Explosives (2,4-Dinitrotoluene, 2,6-Dinitrotoluene), Metals, SVOC, VOC
LH-S021-02	LH-S021-02_1	8/6/93	0.5 - 1	Explosives, Metals, SVOC, VOC
LH-S021-02	LH-S021-02_2	8/6/93	2 - 2.5	Explosives, Metals, SVOC, VOC
LH-S025-01	LH-S025-01_1	8/6/93	0.5 - 1	Explosives, Metals, SVOC, VOC
LH-S025-01	LH-S025-01 QC	8/6/93	0.5 - 1	Explosives (2,4-Dinitrotoluene, 2,6-Dinitrotoluene), Metals, SVOC, VOC
LH-S025-02	LH-S025-02_1	8/6/93	0.5 - 1	Explosives, Metals, SVOC, VOC
LH-S025-02	LH-S025-02_2	8/6/93	1.5 - 2	Explosives, Metals, SVOC, VOC
LH-S026-01	LH-S026-01_1	8/8/93	0.5 - 1	Explosives, Metals, SVOC, VOC
LH-S026-01	LH-S026-01 QC	8/8/93	0.5 - 1	Explosives (2,4-Dinitrotoluene, 2,6-Dinitrotoluene), Metals, SVOC, VOC
LH-S026-02	LH-S026-02_1	8/8/93	0.5 - 1	Explosives, Metals, SVOC, VOC
LH-S026-02	LH-S026-02_2	8/8/93	1 - 1.5	Explosives, Metals, SVOC, VOC
LH-S03-01	LH-S03-01_1	7/10/93	0 - 2	Explosives, Metals, SVOC, VOC
LH-S03-02	LH-S03-02_1	7/10/93	0 - 2	Explosives, Metals, SVOC, VOC
LH-S04-01	LH-S04-01_1	7/9/93	0 - 2	Explosives, Metals, SVOC, VOC
LH-S04-02	LH-S04-02_1	7/9/93	0 - 2	Explosives, Metals, SVOC, VOC
LH-S05-01	LH-S05-01_1	7/9/93	0 - 2	Explosives, Metals, SVOC, VOC
LH-S05-02	LH-S05-02_1	7/9/93	0 - 2	Explosives, Metals, SVOC, VOC
LH-S06-01	LH-S06-01_1	7/9/93	0 - 2	Explosives, Metals, SVOC, VOC
LH-S06-01	LH-S06-01 QC	7/9/93	0 - 2	Explosives (2,4-Dinitrotoluene, 2,6-Dinitrotoluene), Metals, SVOC, VOC
LH-S06-02	LH-S06-02_1	7/9/93	0 - 2	Explosives, Metals, SVOC, VOC
LH-S062-01	LH-S062-01_1	8/5/93	0.5 - 1.2	Explosives, Metals, SVOC, VOC
LH-S062-01	LH-S062-01 QC	8/5/93	0.5 - 1.2	Explosives, Metals, SVOC, VOC
LH-S062-01	LH-S062-01_2	8/5/93	2.5 - 3	Explosives, Metals, SVOC, VOC
LH-S063-01	LH-S063-01_1	8/5/93	1 - 1.5	Explosives, Metals, SVOC, VOC
LH-S063-01	LH-S063-01_2	8/5/93	2 - 2.5	Explosives, Metals, SVOC, VOC
LH-S063-01	LH-S063-01_3	8/5/93	2.5 - 3	Explosives, Metals, SVOC, VOC
LH-S064-01	LH-S064-01_1	8/5/93	1.5 - 2	Explosives, Metals, SVOC, VOC
LH-S064-01	LH-S064-01_3	8/5/93	0.5 - 1	Explosives, Metals, SVOC, VOC
LH-S064-02	LH-S064-02_1	8/5/93	1 - 1.5	Explosives, Metals, SVOC, VOC
LH-S064-02	LH-S064-02_2	8/5/93	2.5 - 3	Explosives, Metals, SVOC, VOC
LH-S065-01	LH-S065-01_1	8/5/93	0.5 - 1	Explosives, Metals, SVOC, VOC
LH-S065-01	LH-S065-01_2	8/5/93	2 - 2.5	Explosives, Metals, SVOC, VOC
LH-S065-02	LH-S065-02_1	8/5/93	0.5 - 1	Explosives, Metals, SVOC, VOC
LH-S07-01	LH-S07-01_1	6/25/93	0.5 - 2.5	Explosives, Metals, SVOC, VOC
LH-S07-02	LH-S07-02_1	6/25/93	0 - 2	Explosives, Metals, SVOC, VOC
LH-S07-02	LH-S07-02_2	6/25/93	2 - 4	Explosives, Metals, SVOC, VOC
LH-S072-01	LH-S072-01_1	8/4/93	0.5 - 1	Metals, SVOC, VOC
LH-S072-02	LH-S072-02_1	8/4/93	0.5 - 1	Metals, SVOC, VOC
LH-S08-01	LH-S08-01_1	7/12/93	0 - 2	Explosives, Metals, SVOC, VOC
LH-S08-02	LH-S08-02_1	7/12/93	0 - 2	Explosives, Metals, SVOC, VOC
LH-S09-01	LH-S09-01_1	6/26/93	0.5 - 1.5	Explosives, Metals, SVOC, VOC
LH-S09-01	LH-S09-01 QC	6/26/93	0.5 - 1.5	Explosives (2,4-Dinitrotoluene, 2,6-Dinitrotoluene), Metals, SVOC, VOC
LH-S09-02	LH-S09-02_1	6/26/93	0.5 - 1.5	Explosives, Metals, SVOC, VOC
LH-S100-01	LH-S100-01_1	6/26/93	0.5 - 1.5	Explosives, Metals, SVOC, VOC
LH-S100-01	LH-S100-01 QC	6/26/93	0.5 - 1.5	Explosives (2,4-Dinitrotoluene, 2,6-Dinitrotoluene), Metals, SVOC, VOC
LH-S100-01	LH-S100-01_2	6/26/93	1.5 - 3	Explosives, Metals, SVOC, VOC
LH-S10-01	LH-S10-01_1	6/26/93	0.5 - 2.5	Metals, SVOC, VOC
LH-S10-02	LH-S10-02_1	7/11/93	0 - 2	Explosives, Metals, SVOC, VOC
LH-S101-01	LH-S101-01_1	6/26/93	0.5 - 1.5	Explosives, Metals, SVOC, VOC
LH-S102-01	LH-S102-01_1	8/3/93	0.5 - 2	Metals, SVOC, VOC
LH-S102-01	LH-S102-01 QC	8/3/93	0.5 - 2	Metals, SVOC, VOC
LH-S102-02	LH-S102-02_1	8/3/93	0.5 - 2	Metals, SVOC, VOC
LH-S103-01	LH-S103-01_1	7/24/93	0.5 - 2	Metals, SVOC, VOC
LH-S103-02	LH-S103-02_1	7/25/93	0.5 - 2	Metals, SVOC, VOC
LH-S104-01	LH-S104-01_1	8/3/93	1.5 - 2.5	Metals, SVOC, VOC
LH-S104-02	LH-S104-02_1	8/3/93	0.5 - 2	Metals, SVOC, VOC
LH-S104-02	LH-S104-02 QC	8/3/93	0.5 - 2	Metals, SVOC, VOC
LH-S105-01	LH-S105-01_1	8/3/93	0.5 - 2	Metals, SVOC, VOC
LH-S105-02	LH-S105-02_1	8/3/93	0.5 - 2	Metals, SVOC, VOC
LH-S107-01	LH-S107-01_1	6/26/93	0.5 - 1.5	Metals, VOC
LH-S107-01	LH-S107-01 QC	6/26/93	0.5 - 1.5	Explosives, Metals, SVOC, VOC
LH-S107-01	LH-S107-01_2	6/26/93	1 - 1.5	Explosives, Metals, SVOC, VOC
LH-S107-01	LH-S107-01_3	6/26/93	2 - 2.5	Explosives, Metals, SVOC, VOC
LH-S108-01	LH-S108-01_1	6/26/93	0.5 - 1.5	Explosives, Metals, SVOC, VOC
LH-S108-01	LH-S108-01_2	6/26/93	2 - 2.5	Explosives, Metals, SVOC, VOC
LH-S109-01	LH-S109-01_1	6/26/93	0.5 - 1.5	Explosives, Metals, SVOC, VOC
LH-S109-01	LH-S109-01_2	6/26/93	2 - 2.5	Explosives, Metals, SVOC, VOC
LH-S110-01	LH-S110-01_1	8/4/93	0.5 - 2	Metals, SVOC, VOC
LH-S11-01	LH-S11-01_1	6/25/93	0 - 2	Explosives, Metals, SVOC, VOC
LH-S11-02	LH-S11-02_1	6/26/93	0.5 - 1.5	Metals, SVOC, VOC
LH-S111-01	LH-S111-01_1	7/8/93	0 - 2	Explosives, Metals, SVOC, VOC
LH-S111-01	LH-S111-01_2	7/8/93	2 - 4	Explosives, Metals, SVOC, VOC
LH-S112-01	LH-S112-01_1	7/8/93	0 - 2	Explosives, Metals, SVOC, VOC
LH-S113-01	LH-S113-01_1	8/4/93	0.5 - 2	Explosives, Metals, SVOC, TPH, VOC
LH-S117-01	LH-S117-01_1	8/4/93	0.5 - 2	Explosives, Metals, SVOC, TPH, VOC
LH-S118-01	LH-S118-01_1	7/8/93	0 - 2	Explosives, Metals, SVOC, VOC
LH-S118-01	LH-S118-01_2	7/8/93	2 - 4	Explosives, Metals, SVOC, VOC
LH-S118-02	LH-S118-02_1	7/8/93	0 - 2	Explosives, Metals, SVOC, VOC
LH-S118-02	LH-S118-02_2	7/8/93	2 - 4	Explosives, Metals, SVOC, VOC

Table 6-2
Sample Summary for Total Soil
Industrial Sub-Area

Location	Sample No [a]	Date	Depth (ft bgs)	Analyses
LH-S119-01	LH-S119-01_1	8/4/93	0.5 - 2	Metals, SVOC, VOC
LH-S119-01	LH-S119-01 QC	8/4/93	0.5 - 2	Metals, SVOC, VOC
LH-S119-02	LH-S119-02_1	8/4/93	0.5 - 2	Metals, SVOC, VOC
LH-S120-01	LH-S120-01_1	8/4/93	0.5 - 2	Metals, SVOC, VOC
LH-S120-02	LH-S120-02 _1	8/4/93	0.5 - 2	Metals, SVOC, VOC
LH-S12-01	LH-S12-01_1	7/11/93	0 - 2	Explosives, Metals, SVOC, VOC
LH-S12-02	LH-S12-02_1	7/11/93	0 - 2	Explosives, Metals, SVOC, VOC
LH-S121-01	LH-S121-01_1	8/4/93	0.5 - 1.5	Explosives, Metals, SVOC, VOC
LH-S121-02	LH-S121-02_1	8/4/93	0.5 - 1.5	Explosives, Metals, SVOC, VOC
LH-S122-01	LH-S122-01_1	8/3/93	0.5 - 1.2	Metals, SVOC, VOC
LH-S122-01	LH-S122-01 QC	8/3/93	0.5 - 1.2	Metals, SVOC, VOC
LH-S122-02	LH-S122-02_1	8/3/93	0.5 - 1	Metals, SVOC, VOC
LH-S123-01	LH-S123-01_1	6/26/93	0.5 - 1.5	Explosives, Metals, SVOC, VOC
LH-S13-01	LH-S13-01_1	7/10/93	0 - 2	Explosives, Metals, SVOC, VOC
LH-S13-01	LH-S13-01 QC	7/10/93	0 - 2	Explosives (2,4-Dinitrotoluene, 2,6-Dinitrotoluene), Metals, SVOC, VOC
LH-S13-02	LH-S13-02_1	7/10/93	0 - 2	Explosives, Metals, SVOC, VOC
LH-S14-01	LH-S14-01_1	7/8/93	0.5 - 1.5	Explosives, Metals, SVOC, VOC
LH-S14-02	LH-S14-02_1	7/8/93	0.5 - 1.5	Explosives, Metals, SVOC, VOC
LH-S15-01	LH-S15-01_1	7/8/93	0.5 - 1.5	Explosives, Metals, SVOC, VOC
LH-S15-02	LH-S15-02_1	7/8/93	0.5 - 1.5	Explosives, Metals, SVOC, VOC
LH-S16-01	LH-S16-01_1	7/8/93	0.5 - 1.5	Explosives, Metals, SVOC, VOC
LH-S19-01	LH-S19-01	8/6/93	1 - 1.5	Explosives, Metals, SVOC, VOC
LH-S19-01	LH-S19-01_1	8/6/93	1.5 - 2	Explosives, Metals, SVOC, VOC
LH-S19-02	LH-S19-02_1	8/6/93	1 - 1.5	Explosives, Metals, SVOC, VOC
LH-S20-01	LH-S20-01_1	6/25/93	0.5 - 2	Explosives, Metals, SVOC, VOC
LH-S20-01	LH-S20-01_2	6/25/93	2 - 4	Explosives, Metals, SVOC, VOC
LH-S20-02	LH-S20-02_1	6/25/93	0.5 - 2	Explosives, Metals, SVOC, VOC
LH-S22-01	LH-S22-01_1	6/25/93	0.5 - 2.5	Explosives, Metals, SVOC, VOC
LH-S22-02	LH-S22-02_1	6/25/93	0.5 - 2.5	Explosives, Metals, SVOC, VOC
LH-S23-01	LH-S23-01_1	7/25/93	0.5 - 1	Explosives, Metals, SVOC, VOC
LH-S23-01	LH-S23-01 QC	7/25/93	0.5 - 1	Explosives (2,4-Dinitrotoluene, 2,6-Dinitrotoluene), Metals, SVOC, VOC
LH-S23-02	LH-S23-02_1	7/25/93	1 - 1.5	Metals, SVOC, VOC
LH-S24-01	LH-S24-01_1	6/25/93	0.5 - 2	Explosives, Metals, SVOC, VOC
LH-S24-01	LH-S24-01_2	6/25/93	2 - 4	Explosives, Metals, SVOC, VOC
LH-S27-01	LH-S27-01_1	6/24/93	0.5 - 2	Explosives, Metals, SVOC, VOC
LH-S27-02	LH-S27-02 _1	6/24/93	0.5 - 1.5	Explosives, Metals, SVOC, VOC
LH-S29-01	LH-S29-01_1	6/25/93	0.5 - 2.5	Explosives, Metals, SVOC, VOC
LH-S29-02	LH-S29-02_1	6/25/93	0 - 2	Explosives, Metals, SVOC, VOC
LH-S29-02	LH-S29-02_2	6/25/93	2 - 4	Explosives, Metals, SVOC, VOC
LH-S30-01	LH-S30-01_1	6/25/93	0.5 - 2.5	Explosives, Metals, SVOC, VOC
LH-S31-01	LH-S31-01_1	7/21/93	0.5 - 1	Explosives, Metals, SVOC, VOC
LH-S32-01	LH-S32-01_1	6/25/93	0.5 - 2.5	Explosives, Metals, SVOC, VOC
LH-S33-01	LH-S33-01_1	7/21/93	0.5 - 1	Explosives, Metals, SVOC, VOC
LH-S34-01	LH-S34-01_2	7/10/93	0.5 - 1.5	Explosives, Metals, SVOC, VOC
LH-S35-01	LH-S35-01_1	6/25/93	0.5 - 2	Explosives, Metals, SVOC, VOC
LH-S37-01	LH-S37-01_1	7/25/93	0.5 - 1	Explosives, Metals, SVOC, VOC
LH-S38-01	LH-S38-01_1	6/26/93	0.5 - 1.5	Metals, SVOC, VOC
LH-S39-01	LH-S39-01 QC	6/26/93	0.5 - 1.5	Explosives (2,4-Dinitrotoluene, 2,6-Dinitrotoluene), Metals, SVOC, VOC
LH-S39-01	LH-S39-01_1	6/26/93	0.5 - 1.5	Explosives, Metals, SVOC, VOC
LH-S40-01	LH-S40-01_1	6/26/93	0.5 - 1.5	Metals, SVOC, VOC
LH-S41-01	LH-S41-01_1	6/25/93	0.5 - 1.5	Explosives, Metals, SVOC, VOC
LH-S42-01	LH-S42-01_1	6/25/93	0.5 - 1.5	Explosives, Metals, SVOC, VOC
LH-S42-01	LH-S42-01 QC	6/25/93	0.5 - 1.5	Explosives (2,4-Dinitrotoluene, 2,6-Dinitrotoluene), Metals, SVOC, VOC
LH-S42-01	LH-S42-01_2	6/25/93	2.5 - 3.3	Explosives, Metals, SVOC, VOC
LH-S43-01	LH-S43-01_1	6/26/93	0.5 - 1	Explosives, Metals, SVOC, VOC
LH-S43-01	LH-S43-01_2	6/26/93	1.5 - 2	Explosives, Metals, SVOC, VOC
LH-S44-01	LH-S44-01_1	7/10/93	0.5 - 1.5	Explosives, Metals, SVOC, VOC
LH-S44-02	LH-S44-02_1	7/11/93	0.5 - 1.5	Explosives, Metals, SVOC, VOC
LH-S45-01	LH-S45-01_1	7/10/93	0.5 - 1.5	Explosives, Metals, SVOC, VOC
LH-S47-01	LH-S47-01_1	7/9/93	0.5 - 1.5	Explosives, Metals, SVOC, VOC
LH-S47-01	LH-S47-01_2	7/9/93	2.2 - 3.2	Explosives, Metals, SVOC, VOC
LH-S48-01	LH-S48-01_1	7/27/93	0.5 - 1	Explosives, Metals, SVOC, VOC
LH-S48-02	LH-S48-02	7/27/93	0.5 - 1	Explosives, Metals, SVOC, VOC
LH-S49-01	LH-S49-01_1	7/9/93	0.5 - 1.5	Explosives, Metals, SVOC, VOC
LH-S49-01	LH-S49-01 QC	7/9/93	0.5 - 1.5	Explosives (2,4-Dinitrotoluene, 2,6-Dinitrotoluene), Metals, SVOC, VOC
LH-S50-01	LH-S50-01_1	7/28/93	0.5 - 1.5	Explosives, Metals, SVOC, VOC
LH-S50-01	LH-S50-01_2	7/27/93	0.5 - 1.5	Explosives, Metals, SVOC, VOC
LH-S51-01	LH-S51-01_1	7/11/93	0.5 - 1.5	Explosives, Metals, SVOC, VOC
LH-S51-01	LH-S51-01 QC	7/11/93	0.5 - 1.5	Explosives (2,4-Dinitrotoluene, 2,6-Dinitrotoluene), Metals, SVOC, VOC
LH-S52-01	LH-S52-01_1	8/3/93	0.5 - 1	Metals, SVOC, VOC
LH-S52-01	LH-S52-01_2	8/3/93	1.5 - 2	Metals, SVOC, VOC
LH-S53-01	LH-S53-01_1	7/13/93	0.5 - 1.5	Explosives, Metals, SVOC, VOC
LH-S53-02	LH-S53-02_1	7/13/93	0.5 - 1.5	Explosives, Metals, SVOC, VOC
LH-S54-01	LH-S54-01_1	7/12/93	0 - 2	Explosives, Metals, SVOC, VOC
LH-S55-01	LH-S55-01_1	7/12/93	0 - 2	Explosives, Metals, SVOC, VOC
LH-S55-01	LH-S55-01 QC	7/12/93	0 - 2	Explosives (2,4-Dinitrotoluene, 2,6-Dinitrotoluene), Metals, SVOC, VOC
LH-S56-01	LH-S56-01_1	8/5/93	0.5 - 2	Explosives, Metals, SVOC, VOC
LH-S57-01	LH-S57-01_1	7/22/93	0.5 - 1	Explosives, Metals, SVOC, VOC
LH-S57-01	LH-S57-01_2	7/22/93	2 - 3	Explosives, Metals, SVOC, VOC
LH-S57-02	LH-S57-02_1	7/22/93	0.5 - 1	Explosives, Metals, SVOC, VOC
LH-S57-02	LH-S57-02_2	7/22/93	2 - 3	Explosives, Metals, SVOC, VOC

Table 6-2
Sample Summary for Total Soil
Industrial Sub-Area

Location	Sample No [a]	Date	Depth (ft bgs)	Analyses
LH-S58-01	LH-S58-01_1	6/26/93	0.5 - 1.5	Explosives, Metals, SVOC, VOC
LH-S59-01	LH-S59-01_1	7/21/93	0.5 - 1	Explosives, Metals, SVOC, VOC
LH-S59-02	LH-S59-02_1	7/21/93	0.5 - 1	Explosives, Metals, SVOC, VOC
LH-S60-01	LH-S60-01_1	7/22/93	0.5 - 1	Explosives, Metals, SVOC, VOC
LH-S60-02	LH-S60-02_2	7/22/93	0.5 - 1	Explosives, Metals, SVOC, VOC
LH-S60-02	LH-S60-02_3	7/22/93	2.5 - 3	Explosives, Metals, SVOC, VOC
LH-S61-01	LH-S61-01_1	8/6/93	0.5 - 3	Explosives, Metals, SVOC, VOC
LH-S61-02	LH-S61-02_1	8/6/93	1 - 3	Explosives, Metals, SVOC, VOC
LH-S66-01	LH-S66-01_1	8/5/93	0.5 - 2	Explosives, Metals, SVOC, VOC
LH-S66-01	LH-S66-01 QC	8/5/93	0.5 - 2	Explosives, Metals, SVOC, VOC
LH-S66-02	LH-S66-02_1	8/5/93	0.5 - 2	Explosives, Metals, SVOC, VOC
LH-S67-01	LH-S67-01_1	8/6/93	0.5 - 2	Explosives, Metals, SVOC, VOC
LH-S68-01	LH-S68-01_1	8/6/93	0.5 - 2	Explosives, Metals, SVOC, VOC
LH-S68-01	LH-S68-01 QC	8/6/93	0.5 - 2	Explosives (2,4-Dinitrotoluene, 2,6-Dinitrotoluene), Metals, SVOC, VOC
LH-S68-02	LH-S68-02	8/6/93	0.5 - 1.5	Explosives, Metals, SVOC, VOC
LH-S68-02	LH-S68-02 QC	8/6/93	0.5 - 1.5	Explosives (2,4-Dinitrotoluene, 2,6-Dinitrotoluene), Metals, SVOC, VOC
LH-S69-01	LH-S69-01_1	6/26/93	0.5 - 1.5	Explosives, Metals, SVOC, VOC
LH-S69-01	LH-S69-01 QC	6/26/93	0.5 - 1.5	Explosives (2,4-Dinitrotoluene, 2,6-Dinitrotoluene), Metals, SVOC, VOC
LH-S69-02	LH-S69-02_1	6/26/93	0.5 - 1.5	Explosives, Metals, SVOC, VOC
LH-S70-01	LH-S70-01_1	7/24/93	0.5 - 2	Explosives, Metals, SVOC, TPH, VOC
LH-S70-02	LH-S70-02_1	7/24/93	0.5 - 2	Explosives, Metals, SVOC, TPH, VOC
LH-S71-01	LH-S71-01_1	7/24/93	1 - 1.5	Explosives, Metals, SVOC, VOC
LH-S71-02	LH-S71-02_1	7/24/93	1 - 1.5	Explosives, Metals, SVOC, VOC
LH-S723-01	LH-S723-01_1	6/26/93	0.5 - 1.5	Explosives, Metals, SVOC, VOC
LH-S723-02	LH-S723-02_1	6/26/93	0.5 - 1.5	Explosives, Metals, SVOC, VOC
LH-S73-01	LH-S73-01_1	6/26/93	0.5 - 1.5	Explosives, Metals, SVOC, VOC
LH-S75-01	LH-S75-01_1	6/26/93	0.5 - 1.5	Explosives, Metals, SVOC, VOC
LH-S75-02	LH-S75-02_1	6/26/93	0.5 - 1.5	Explosives, Metals, SVOC, VOC
LH-S76-01	LH-S76-01_1	6/26/93	0.5 - 1.5	Explosives, Metals, SVOC
LH-S76-01	LH-S76-01_2	6/26/93	2 - 2.5	Explosives, Metals, SVOC
LH-S76-02	LH-S76-02_1	6/26/93	0.5 - 1.5	Explosives, Metals, SVOC, VOC
LH-S77-01	LH-S77-01_1	6/26/93	0.5 - 1.5	Explosives, Metals, SVOC, VOC
LH-S77-01	LH-S77-01 QC	6/26/93	0.5 - 1.5	Explosives (2,4-Dinitrotoluene, 2,6-Dinitrotoluene), Metals, SVOC, VOC
LH-S77-01	LH-S77-01_2	6/26/93	1.5 - 3	Explosives, Metals, SVOC, VOC
LH-S77-02	LH-S77-02_1	6/26/93	0.5 - 1.5	Explosives, Metals, SVOC, VOC
LH-S77-02	LH-S77-02_2	6/26/93	2.5 - 3	Explosives, Metals, SVOC, VOC
LH-S78-01	LH-S78-01_1	7/24/93	0.5 - 2	Explosives, Metals, SVOC, VOC
LH-S79-01	LH-S79-01_1	7/24/93	0.5 - 2	Explosives, Metals, SVOC, VOC
LH-S80-01	LH-S80-01_1	7/24/93	0.5 - 2	Explosives, Metals, SVOC, VOC
LH-S80-01	LH-S80-01 QC	7/24/93	0.5 - 2	Explosives (2,4-Dinitrotoluene, 2,6-Dinitrotoluene), Metals, SVOC, VOC
LH-S81-01	LH-S81-01_1	7/23/93	0.5 - 2	Explosives, Metals, SVOC, VOC
LH-S81-02	LH-S81-02_1	7/23/93	0.5 - 2	Explosives, Metals, SVOC, VOC
LH-S82-01	LH-S82-01_1	7/23/93	0.5 - 2	Explosives, Metals, SVOC, VOC
LH-S82-02	LH-S82-02_3	7/24/93	0 - 0	Explosives, Metals, SVOC, VOC
LH-S83-01	LH-S83-01_1	7/23/93	0.5 - 2	Explosives, Metals, SVOC, VOC
LH-S83-02	LH-S83-02_1	7/23/93	0.5 - 2	Explosives, Metals, SVOC, VOC
LH-S83-02	LH-S83-02 QC	7/23/93	0.5 - 2	Explosives (2,4-Dinitrotoluene, 2,6-Dinitrotoluene), Metals, SVOC, VOC
LH-S84-01	LH-S84-01_1	7/21/93	0.5 - 1.5	Explosives, Metals, SVOC, VOC
LH-S84-01	LH-S84-01 QC	7/21/93	0.5 - 1.5	Explosives (2,4-Dinitrotoluene, 2,6-Dinitrotoluene), Metals, SVOC, VOC
LH-S86-01	LH-S86-01_1	7/27/93	0.5 - 2	Explosives, Metals, SVOC, VOC
LH-S86-01	LH-S86-01 QC	7/27/93	0.5 - 2	Explosives (2,4-Dinitrotoluene, 2,6-Dinitrotoluene), Metals, SVOC, VOC
LH-S86-02	LH-S86-02_1	7/27/93	0.5 - 2	Metals, SVOC, VOC
LH-S87-01	LH-S87-01_1	7/22/93	0.5 - 2	Explosives, Metals, SVOC, VOC
LH-S87-01	LH-S87-01_2	6/26/93	2.5 - 3	Explosives, Metals, SVOC, VOC
LH-S88-01	LH-S88-01_1	7/22/93	0.5 - 2	Explosives, Metals, SVOC, VOC
LH-S88-01	LH-S88-01 QC	7/22/93	0.5 - 2	Explosives (2,4-Dinitrotoluene, 2,6-Dinitrotoluene), Metals, SVOC, VOC
LH-S88-02	LH-S88-02_1	7/22/93	0.5 - 2	Explosives, Metals, SVOC, VOC
LH-S89-01	LH-S89-01_1	7/21/93	0.5 - 2	Explosives, Metals, SVOC, VOC
LH-S89-02	LH-S89-02_1	7/21/93	0.5 - 2	Explosives, Metals, SVOC, VOC
LH-S90-01	LH-S90-01_1	7/21/93	0.5 - 1.5	Explosives, Metals, SVOC, VOC
LH-S90-02	LH-S90-02_1	7/21/93	0.5 - 2	Explosives, Metals, SVOC, VOC
LH-S91-01	LH-S91-01_1	7/23/93	0.5 - 1	Explosives, Metals, SVOC, VOC
LH-S91-02	LH-S91-02_1	7/24/93	0.5 - 1	Explosives, Metals, SVOC, VOC
LH-S92-01	LH-S92-01_1	7/23/93	0.5 - 1	Explosives, Metals, SVOC, VOC
LH-S92-01	LH-S92-01 QC	7/23/93	0.5 - 1	Explosives (2,4-Dinitrotoluene, 2,6-Dinitrotoluene), Metals, SVOC, VOC
LH-S92-02	LH-S92-02_1	7/23/93	0.5 - 1	Explosives, Metals, SVOC, VOC
LH-S93-01	LH-S93-01_1	7/24/93	0.5 - 1	Explosives, Metals, SVOC, VOC
LH-S93-02	LH-S93-02 _1	7/24/93	0.5 - 1	Explosives, Metals, SVOC, VOC
LH-S94-01	LH-S94-01_1	8/20/93	0.5 - 1.5	Explosives, Metals, SVOC, VOC
LH-S95-01	LH-S95-01_1	6/26/93	0.5 - 1.5	Explosives, Metals, SVOC, VOC
LH-S95-01	LH-S95-01 QC	6/26/93	0.5 - 1.5	Explosives (2,4-Dinitrotoluene, 2,6-Dinitrotoluene), Metals, SVOC, VOC
LH-S95-02	LH-S95-02_1	6/26/93	0.5 - 1.5	Explosives, Metals, SVOC, VOC
LH-S96-01	LH-S96-01_1	6/26/93	0.5 - 1.5	Explosives, Metals, SVOC, VOC
LH-S96-01	LH-S96-01_2	6/26/93	2 - 2.8	Explosives, Metals, SVOC, VOC
LH-S97-01	LH-S97-01_1	6/26/93	0.5 - 1.5	Explosives, Metals, SVOC, VOC
LH-S98-01	LH-S98-01_1	6/26/93	0.5 - 1.5	Explosives, Metals, SVOC, VOC
LH-S98-01	LH-S98-01_2	6/26/93	1.5 - 3	Explosives, Metals, SVOC, VOC
LH-S99-01	LH-S99-01_1	6/26/93	0.5 - 1.5	Explosives, Metals, SVOC, VOC
LH-S99-01	LH-S99-01 QC	6/26/93	0.5 - 1.5	Explosives (2,4-Dinitrotoluene, 2,6-Dinitrotoluene), Metals, SVOC, VOC
LH-S99-01	LH-S99-01_2	6/26/93	2 - 2.8	Explosives, Metals, SVOC, VOC
LHSMW01	LHS-MW1	9/30/94	0 - 0.5	Explosives, Metals, SVOC, VOC

Table 6-2
Sample Summary for Total Soil
Industrial Sub-Area

Location	Sample No [a]	Date	Depth (ft bgs)	Analyses
LHSMW02	LHS-MW2	9/30/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW03	LHS-MW3	9/30/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW04	LHS-MW4	9/30/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW05	LHS-MW5	9/30/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW06	LHS-MW6	9/30/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW07	LHS-MW7	9/30/94	0 - 0.5	Explosives, Metals, SVOC, TPH, VOC
LHSMW08	LHS-MW8	9/30/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW09	LHS-MW9	9/30/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW10	LHS-MW10	9/30/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW11	LHS-MW11	9/30/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW11	LHS-MW11 QC	9/30/94	0 - 0.5	Metals, SVOC, VOC
LHSMW12	LHS-MW12	9/30/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW13	LHS-MW13	9/30/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW14	LHS-MW14	9/30/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW15	LHS-MW15	9/30/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW16	LHS-MW16	9/30/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW17	LHS-MW17	9/30/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW18	LHS-MW18	9/30/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW19	LHS-MW19	9/30/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW20	LHS-MW20	10/3/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW20	LHS-MW20 QC	10/3/94	0 - 0.5	Metals, SVOC, VOC
LHSMW21	LHS-MW21	10/3/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW21SS01	MW21SS01(0-0.5)	7/26/98	0 - 0.5	PAH
LHSMW21SS01	MW21SS01(0-0.5)D	7/26/98	0 - 0.5	PAH
LHSMW21SS02	MW21SS02(0-0.5)	7/26/98	0 - 0.5	PAH
LHSMW21SS03	MW21SS03(0-0.5)	7/26/98	0 - 0.5	PAH
LHSMW21SS04	MW21SS04(0-0.5)	7/26/98	0 - 0.5	PAH
LHSMW21SS05	MW21SS05(0-0.5)	7/26/98	0 - 0.5	PAH
LHSMW21SS06	MW21SS06(0-0.5)	7/26/98	0 - 0.5	PAH
LHSMW22	LHS-MW22	10/3/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW23	LHS-MW23	10/3/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW24	LHS-MW24	10/3/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW25	LHS-MW25	10/3/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW26	LHS-MW26	10/3/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW27	LHS-MW27	10/3/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW28	LHS-MW28	10/3/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW29	LHS-MW29	10/3/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW30	LHS-MW30	10/3/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW30	LHS-MW30 QC	10/3/94	0 - 0.5	Metals, SVOC, VOC
LHSMW31	LHS-MW31	10/4/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW32	LHS-MW32	10/4/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW33	LHS-MW33	10/4/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW34	LHS-MW34	10/4/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW35	LHS-MW35	10/4/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW36	LHS-MW36	10/4/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW37	LHS-MW37	10/4/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW38	LHS-MW38	10/4/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW39	LHS-MW39	10/4/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW40	LHS-MW40	10/4/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW40	LHS-MW40 QC	10/4/94	0 - 0.5	Metals, SVOC, VOC
LHSMW41	LHS-MW41	10/4/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW42	LHS-MW42	10/4/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW43	LHS-MW43	10/5/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW44	LHS-MW44	10/5/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW45	LHS-MW45	10/5/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW46	LHS-MW46	10/5/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW47	LHS-MW47	10/5/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW48	LHS-MW48	10/5/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW49	LHS-MW49	10/5/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW50	LHS-MW50	10/5/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW50	LHS-MW50 QC	10/5/94	0 - 0.5	Metals, SVOC, VOC
LHSMW51	LHS-MW51	10/5/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW52	LHS-MW52	10/5/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW53	LHS-MW53	10/5/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW54	LHS-MW54	10/5/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW55	LHS-MW55	10/5/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW56	LHS-MW56	10/5/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW57	LHS-MW57	10/5/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW58	LHS-MW58	10/5/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW59	LHS-MW59	10/5/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW60	LHS-MW60	10/5/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW60	LHS-MW60 QC	10/5/94	0 - 0.5	Metals, SVOC, VOC
LHSMW61	LHS-MW61	10/5/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW62	LHS-MW62	10/5/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW63	LHS-MW63	10/5/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW64	LHS-MW64	10/5/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW65	LHS-MW65	10/5/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW66	LHS-MW66	10/5/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW67	LHS-MW67	10/5/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW68	LHS-MW68	10/5/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW69	LHS-MW69	10/5/94	0 - 0.5	Explosives, Metals, SVOC, VOC

Table 6-2
Sample Summary for Total Soil
Industrial Sub-Area

Location	Sample No [a]	Date	Depth (ft bgs)	Analyses
LHSMW70	LHS-MW70	10/5/94	0 - 0.5	Explosives, Metals, SVOC, VOC
LHSMW70	LHS-MW70 QC	10/5/94	0 - 0.5	Metals, SVOC, VOC
LHSMW71	LHS-MW71	10/5/94	0 - 0.5	Explosives, Metals, SVOC, VOC
MAM-GP150-SS	MAM-GP150-SS	2/25/04	0 - 0.5	Dioxin/Furans, Explosives, General Chemistry, Metals, PAH, Perchlorate, Pest/PCB
MAM-P2212-SS	MAM-P2212-SS	2/25/04	0 - 0.5	Dioxin/Furans, Explosives, General Chemistry, Metals, PAH, Perchlorate, Pest/PCB
MAM-P2237-SS	MAM-P2237-SS	2/25/04	0 - 0.5	Dioxin/Furans, Explosives, General Chemistry, Metals, PAH, Perchlorate, Pest/PCB
MAM-P2268-SS	MAM-P2268-SS	2/25/04	0 - 0.5	Dioxin/Furans, Explosives, General Chemistry, Metals, PAH, Perchlorate, Pest/PCB
MAM-P2544-SS	MAM-P2544-SS	2/25/04	0 - 0.5	Dioxin/Furans, Explosives, General Chemistry, Metals, PAH, Pest/PCB
MAM-P2571-SS	MAM-P2571-SS	2/25/04	0 - 0.5	Dioxin/Furans, Explosives, General Chemistry, Metals, PAH, Perchlorate, Pest/PCB
MAM-P2571-SS	MAM-P2571-SS-QC	2/25/04	0 - 0.5	Dioxin/Furans, Explosives, General Chemistry, Metals, PAH, Perchlorate, Pest/PCB
MAM-P2586-SS	MAM-P2586-SS	2/25/04	0 - 0.5	Dioxin/Furans, Explosives, General Chemistry, Metals, PAH, Perchlorate, Pest/PCB
MAM-W220-SS	MAM-W220-SS	2/24/04	0 - 0.5	Dioxin/Furans, Explosives, General Chemistry, Metals, PAH, Perchlorate, Pest/PCB
MAM-W220-SS	MAM-W220-SS-QC	2/24/04	0 - 0.5	Dioxin/Furans, Explosives, General Chemistry, Metals, PAH, Perchlorate, Pest/PCB
MAM-W250-SS	MAM-W250-SS	2/24/04	0 - 0.5	Dioxin/Furans, Explosives, General Chemistry, Metals, PAH, Perchlorate, Pest/PCB
STEP-04SS01	04SS01(0-0.5)-020310	3/10/02	0 - 0.5	Perchlorate
STEP-04SS01	04SS01(1-2)-020310	3/10/02	1 - 2	Perchlorate
STEP-04SS02	04SS02(0-0.5)-020310	3/10/02	0 - 0.5	Perchlorate
STEP-04SS02	04SS02(1-2)-020310	3/10/02	1 - 2	Perchlorate
STEP-04SS03	04SS03(0-0.5)-02	3/10/02	0 - 0.5	Perchlorate
STEP-04SS03	04SS03(0-0.5)-02_QC	3/10/02	0 - 0.5	Perchlorate
STEP-04SS03	04SS03(1-2)-020310	3/10/02	1 - 2	Perchlorate
STEP-04SS04	04SS04(0-0.5)-020311	3/11/02	0 - 0.5	Perchlorate
STEP-04SS04	04SS04(1-2)-020311	3/11/02	1 - 2	Perchlorate
STEP-04SS05	04SS05(0-0.5)-020311	3/11/02	0 - 0.5	Perchlorate
STEP-04SS05	04SS05(1-2)-020311	3/11/02	1 - 2	Perchlorate
STEP-04SS06	04SS06(0-0.5)-020311	3/11/02	0 - 0.5	Perchlorate
STEP-04SS06	04SS06(1-2)-020311	3/11/02	1 - 2	Perchlorate
STEP-04SS07	04SS07(0-0.5)-020311	3/11/02	0 - 0.5	Perchlorate
STEP-04SS07	04SS07(1-2)-020311	3/11/02	1 - 2	Perchlorate
STEP-04SS08	04SS08(0-0.5)-02	3/11/02	0 - 0.5	Perchlorate
STEP-04SS08	04SS08(0-0.5)-02_QC	3/11/02	0 - 0.5	Perchlorate
STEP-04SS08	04SS08(1-2)-020311	3/11/02	1 - 2	Perchlorate
STEP-04SS09	04SS09(0-0.5)-020311	3/11/02	0 - 0.5	Perchlorate
STEP-04SS09	04SS09(1-2)-020311	3/11/02	1 - 2	Perchlorate
STEP-04SS10	04SS10(0-0.5)-020311	3/11/02	0 - 0.5	Perchlorate
STEP-04SS10	04SS10(1-2)-020311	3/11/02	1 - 2	Perchlorate
STEP-04SS11	04SS11(0-0.5)-02	3/11/02	0 - 0.5	Perchlorate
STEP-04SS11	04SS11(0-0.5)-02_QC	3/11/02	0 - 0.5	Perchlorate
STEP-04SS11	04SS11(1-2)-020311	3/11/02	1 - 2	Perchlorate
STEP-04SS13	04SS13(0-0.5)-020311	3/11/02	0 - 0.5	Perchlorate
STEP-04SS13	04SS13(1-2)-020311	3/11/02	1 - 2	Perchlorate
STEP-04SS14	04SS14(0-0.5)-020311	3/11/02	0 - 0.5	Perchlorate
STEP-04SS14	04SS14(1-2)-020311	3/11/02	1 - 2	Perchlorate
STEP-04SS15	04SS15(0-0.5)-020311	3/11/02	0 - 0.5	Perchlorate
STEP-04SS15	04SS15(1-2)-020311	3/11/02	1 - 2	Perchlorate
STEP-29SS01	29SS01(0-0.5)-020309	3/9/02	0 - 0.5	Perchlorate
STEP-29SS01	29SS01(1-2)-020309	3/9/02	1 - 2	Perchlorate
STEP-29SS02	29SS02(0-0.5)-020309	3/9/02	0 - 0.5	Perchlorate
STEP-29SS02	29SS02(1-2)-020309	3/9/02	1 - 2	Perchlorate
STEP-29SS03	29SS03(0-0.5)-02	3/9/02	0 - 0.5	Perchlorate
STEP-29SS03	29SS03(0-0.5)-02_QC	3/9/02	0 - 0.5	Perchlorate
STEP-29SS03	29SS03(1-2)-020309	3/9/02	1 - 2	Perchlorate
STEP-29SS04	29SS04(0-0.5)-020309	3/9/02	0 - 0.5	Perchlorate
STEP-29SS04	29SS04(1-2)-020309	3/9/02	1 - 2	Perchlorate
STEP-29SS05	29SS05(0-0.5)-020309	3/9/02	0 - 0.5	Perchlorate
STEP-29SS05	29SS05(1-2)-020309	3/9/02	1 - 2	Perchlorate
STEP-29SS06	29SS06(0-0.5)-020309	3/9/02	0 - 0.5	Perchlorate
STEP-29SS06	29SS06(1-2)-020309	3/9/02	1 - 2	Perchlorate
STEP-29SS07	29SS07(0-0.5)-020309	3/9/02	0 - 0.5	Perchlorate
STEP-29SS07	29SS07(1-2)-020309	3/9/02	1 - 2	Perchlorate
STEP-29SS08	29SS08(0-0.5)-02	3/10/02	0 - 0.5	Perchlorate
STEP-29SS08	29SS08(0-0.5)-02_QC	3/10/02	0 - 0.5	Perchlorate
STEP-29SS08	29SS08(1-2)-020310	3/10/02	1 - 2	Perchlorate
STEP-29SS09	29SS09(0-0.5)-020310	3/10/02	0 - 0.5	Perchlorate
STEP-29SS09	29SS09(1-2)-020310	3/10/02	1 - 2	Perchlorate
STEP-29SS10	29SS10(0-0.5)-020310	3/10/02	0 - 0.5	Perchlorate
STEP-29SS10	29SS10(1-2)-020310	3/10/02	1 - 2	Perchlorate
STEP-29SS11	29SS11(0-0.5)-020310	3/10/02	0 - 0.5	Perchlorate
STEP-29SS11	29SS11(1-2)-020310	3/10/02	1 - 2	Perchlorate
STEP-29SS12	29SS12(0-0.5)-020310	3/10/02	0 - 0.5	Perchlorate
STEP-29SS12	29SS12(1-2)-020310	3/10/02	1 - 2	Perchlorate
STEP-29SS13	29SS13(0-0.5)-02	3/10/02	0 - 0.5	Perchlorate
STEP-29SS13	29SS13(0-0.5)-02_QC	3/10/02	0 - 0.5	Perchlorate
STEP-29SS13	29SS13(1-2)-020310	3/10/02	1 - 2	Perchlorate
STEP-29SS14	29SS14(0-0.5)-020310	3/10/02	0 - 0.5	Perchlorate
STEP-29SS14	29SS14(1-2)-020310	3/10/02	1 - 2	Perchlorate
STEP-29SS15	29SS15(0-0.5)-020310	3/10/02	0 - 0.5	Perchlorate
STEP-29SS15	29SS15(1-2)-020310	3/10/02	1 - 2	Perchlorate
STEP-29SS16	29SS16(0-0.5)-020917	9/17/02	0 - 0.5	Perchlorate
STEP-29SS16	29SS16(1-2)-020917	9/17/02	1 - 2	Perchlorate
STEP-29SS17	29SS17(0-0.5)-020917	9/17/02	0 - 0.5	Perchlorate

Table 6-2
Sample Summary for Total Soil
Industrial Sub-Area

Location	Sample No [a]	Date	Depth (ft bgs)	Analyses
STEP-29SS17	29SS17(1-2)-020917	9/17/02	1 - 2	Perchlorate
STEP-29SS18	29SS18(0-0.5)-020917	9/17/02	0 - 0.5	Perchlorate
STEP-29SS18	29SS18(1-2)-020917	9/17/02	1 - 2	Perchlorate
STEP-29SS19	29SS19(0-0.5)-020917	9/17/02	0 - 0.5	Perchlorate
STEP-29SS19	29SS19(1-2)-020917	9/17/02	1 - 2	Perchlorate
STEP-29SS20	29SS20(0-0.5)-020917	9/17/02	0 - 0.5	Perchlorate
STEP-29SS20	29SS20(1-2)-020917	9/17/02	1 - 2	Perchlorate
STEP-29SS21	29SS21(0-0.5)-02	9/17/02	0 - 0.5	Perchlorate
STEP-29SS21	29SS21(0-0.5)-02_QC	9/17/02	0 - 0.5	Perchlorate
STEP-29SS21	29SS21(1-2)-020917	9/17/02	1 - 2	Perchlorate
STEP-29SS22	29SS22(0-0.5)-020918	9/18/02	0 - 0.5	Perchlorate
STEP-29SS22	29SS22(1-2)-020918	9/18/02	1 - 2	Perchlorate
STEP-29SS23	29SS23(0-0.5)-020918	9/18/02	0 - 0.5	Perchlorate
STEP-29SS23	29SS23(1-2)-020918	9/18/02	1 - 2	Perchlorate
STEP-29SS24	29SS24(0-0.5)-020918	9/18/02	0 - 0.5	Perchlorate
STEP-29SS24	29SS24(1-2)-020918	9/18/02	1 - 2	Perchlorate
STEP-29SS25	29SS25(0-0.5)-020918	9/18/02	0 - 0.5	Perchlorate
STEP-29SS26	29SS26(0-0.5)-020919	9/19/02	0 - 0.5	Perchlorate
STEP-29SS27	29SS27(0-0.5)-020919	9/19/02	0 - 0.5	Perchlorate
STEP-29SS28	29SS28(0-0.5)-020918	9/18/02	0 - 0.5	Perchlorate
STEP-46SS01	46SS01(0-0.5)-020311	3/11/02	0 - 0.5	Perchlorate
STEP-46SS01	46SS01(1-2)-020311	3/11/02	1 - 2	Perchlorate
STEP-46SS02	46SS02(0-0.5)-020311	3/11/02	0 - 0.5	Perchlorate
STEP-46SS02	46SS02(1-2)-020311	3/11/02	1 - 2	Perchlorate
STEP-46SS03	46SS03(0-0.5)-020312	3/12/02	0 - 0.5	Perchlorate
STEP-46SS03	46SS03(1-2)-020312	3/12/02	1 - 2	Perchlorate
STEP-46SS04	46SS04(0-0.5)-020312	3/12/02	0 - 0.5	Perchlorate
STEP-46SS04	46SS04(1-2)-020312	3/12/02	1 - 2	Perchlorate
STEP-46SS05	46SS05(0-0.5)-020312	3/12/02	0 - 0.5	Perchlorate
STEP-46SS05	46SS05(1-2)-020312	3/12/02	1 - 2	Perchlorate
STEP-46SS06	46SS06(0-0.5)-020312	3/12/02	0 - 0.5	Perchlorate
STEP-46SS06	46SS06(1-2)-020312	3/12/02	1 - 2	Perchlorate
STEP-46SS07	46SS07(0-0.5)-02	3/12/02	0 - 0.5	Perchlorate
STEP-46SS07	46SS07(0-0.5)-02_QC	3/12/02	0 - 0.5	Perchlorate
STEP-46SS07	46SS07(1-2)-020312	3/12/02	1 - 2	Perchlorate
STEP-46SS08	46SS08(0-0.5)-020312	3/12/02	0 - 0.5	Perchlorate
STEP-46SS08	46SS08(1-2)-020312	3/12/02	1 - 2	Perchlorate
STEP-46SS09	46SS09(0-0.5)-020312	3/12/02	0 - 0.5	Perchlorate
STEP-46SS09	46SS09(1-2)-020312	3/12/02	1 - 2	Perchlorate
STEP-46SS10	46SS10(0-0.5)-020312	3/12/02	0 - 0.5	Perchlorate
STEP-46SS10	46SS10(1-2)-020312	3/12/02	1 - 2	Perchlorate
STEP-46SS11	46SS11(0-0.5)-020312	3/12/02	0 - 0.5	Perchlorate
STEP-46SS11	46SS11(1-2)-020312	3/12/02	1 - 2	Perchlorate
STEP-46SS12	46SS12(0-0.5)-02	3/12/02	0 - 0.5	Perchlorate
STEP-46SS12	46SS12(0-0.5)-02_QC	3/12/02	0 - 0.5	Perchlorate
STEP-46SS12	46SS12(1-2)-020312	3/12/02	1 - 2	Perchlorate
STEP-46SS13	46SS13(0-0.5)-020312	3/12/02	0 - 0.5	Perchlorate
STEP-46SS13	46SS13(1-2)-020312	3/12/02	1 - 2	Perchlorate
STEP-46SS14	46SS14(0-0.5)-020312	3/12/02	0 - 0.5	Perchlorate
STEP-46SS14	46SS14(1-2)-020312	3/12/02	1 - 2	Perchlorate
STEP-46SS15	46SS15(0-0.5)-020312	3/12/02	0 - 0.5	Perchlorate
STEP-46SS15	46SS15(1-2)-020312	3/12/02	1 - 2	Perchlorate
STEP-47SS01	47SS01(0-0.5)-020310	3/10/02	0 - 0.5	Perchlorate
STEP-47SS01	47SS01(1-2)-020310	3/10/02	1 - 2	Perchlorate
STEP-47SS02	47SS02(0-0.5)-020310	3/10/02	0 - 0.5	Perchlorate
STEP-47SS02	47SS02(1-2)-020310	3/10/02	1 - 2	Perchlorate
STEP-47SS03	47SS03(0-0.5)-02	3/10/02	0 - 0.5	Perchlorate
STEP-47SS03	47SS03(0-0.5)-02_QC	3/10/02	0 - 0.5	Perchlorate
STEP-47SS03	47SS03(1-2)-020310	3/10/02	1 - 2	Perchlorate
STEP-47SS04	47SS04(0-0.5)-020310	3/10/02	0 - 0.5	Perchlorate
STEP-47SS04	47SS04(1-2)-020310	3/10/02	1 - 2	Perchlorate
STEP-47SS05	47SS05(0-0.5)-020310	3/10/02	0 - 0.5	Perchlorate
STEP-47SS05	47SS05(1-2)-020310	3/10/02	1 - 2	Perchlorate
STEP-47SS06	47SS06(0-0.5)-020310	3/10/02	0 - 0.5	Perchlorate
STEP-47SS06	47SS06(1-2)-020310	3/10/02	1 - 2	Perchlorate
STEP-47SS07	47SS07(0-0.5)-020310	3/10/02	0 - 0.5	Perchlorate
STEP-47SS07	47SS07(1-2)-020310	3/10/02	1 - 2	Perchlorate
STEP-47SS08	47SS08(0-0.5)-02	3/10/02	0 - 0.5	Perchlorate
STEP-47SS08	47SS08(0-0.5)-02_QC	3/10/02	0 - 0.5	Perchlorate
STEP-47SS08	47SS08(1-2)-020310	3/10/02	1 - 2	Perchlorate
STEP-47SS09	47SS09(0-0.5)-020310	3/10/02	0 - 0.5	Perchlorate
STEP-47SS09	47SS09(1-2)-020310	3/10/02	1 - 2	Perchlorate
STEP-47SS10	47SS10(0-0.5)-020310	3/10/02	0 - 0.5	Perchlorate
STEP-47SS10	47SS10(1-2)-020310	3/10/02	1 - 2	Perchlorate
STEP-50SS01	50SS01(0-0.5)-020309	3/9/02	0 - 0.5	Perchlorate
STEP-50SS01	50SS01(1-2)-020309	3/9/02	1 - 2	Perchlorate
STEP-50SS02	50SS02(0-0.5)-020309	3/9/02	0 - 0.5	Perchlorate
STEP-50SS02	50SS02(1-2)-020309	3/9/02	1 - 2	Perchlorate
STEP-50SS03	50SS03(0-0.5)-02	3/9/02	0 - 0.5	Perchlorate
STEP-50SS03	50SS03(0-0.5)-02_QC	3/9/02	0 - 0.5	Perchlorate
STEP-50SS03	50SS03(1-2)-020309	3/9/02	1 - 2	Perchlorate

Table 6-2
Sample Summary for Total Soil
Industrial Sub-Area

Location	Sample No [a]	Date	Depth (ft bgs)	Analyses
STEP-50SS04	50SS04(0-0.5)-020309	3/9/02	0 - 0.5	Perchlorate
STEP-50SS04	50SS04(1-2)-020309	3/9/02	1 - 2	Perchlorate
STEP-50SS05	50SS05(0-0.5)-020309	3/9/02	0 - 0.5	Perchlorate
STEP-50SS05	50SS05(1-2)-020309	3/9/02	1 - 2	Perchlorate

Notes:

General Chemistry parameters include: chloride, cyanide, fluoride, nitrate, nitrite, sulfate, pH, percent solids, total organic carbon, total phosphorus, and total solids.

Samples may not have been analyzed for all parameters.

[a] Field duplicates are indicated by the addition of "QC", "QA", "FD", "D", or "DUP" to the sample numbe

[b] Total soil is defined as samples 0 to 3 feet bgs. Deeper samples were also considered surface soil if at least 50% of their samplir
depth interval was less than 3 ft bgs (e.g., 2-4 ft bgs).

[c] Metals analysis for antimony, arsenic, barium, cadmium, chromium, lead, mercury, nickel, selenium, silver, and thallium c

[d] Explosives data from ITS laboratory were of questionable quality and were not use

[e] Metals analysis for antimony, arsenic, barium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, and zinc c

[f] Metals analysis for antimony, arsenic, barium, cadmium, chromium, lead, nickel, selenium, silver, and thallium o

[g] Metals analysis for barium, cadmium, chromium, lead, mercury, nickel, and silver or

ft bgs feet below ground surface
PAH Polynuclear aromatic hydrocarbons
PCB Polychlorinated biphenyls
Pest Pesticides
SVOC Semivolatile organic compounds
TPH Total petroleum hydrocarbons
VOC Volatile organic compounds

Table 6-3
Sample Summary for Total Soil
Low Impact Sub-Area

Location	Sample No [a]	Date	Depth (ft bgs)	Analyses
Total Soil [b]				
11SB03	LH11-SB03 (0-2)	3/3/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
11SB04	C940822-11SB04-N00	8/22/94	0 - 0	Acetone, Methylene chloride, Trichloroethene
11SB04	LH11-SB04 (0-2)	3/3/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
11SB05	C940822-11SB05-N00	8/22/94	0 - 0	Acetone, Methylene chloride, Trichloroethene
11SB05	LH11-SB05 (0-2)	3/4/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
11SB06	C940822-11SB06-N00	8/22/94	0 - 0	VOC
11SB06	LH11-SB06 (0-2)	3/4/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
11SD13	LH11-SD13	3/31/93	0 - 0	Explosives, General Chemistry, Metals[c], SVOC, VOC
11WW01	11WW01 (0-2')	8/22/94	0 - 2	Explosives[d], General Chemistry, Metals[c], SVOC, VOC
11WW02	11WW02 (0-2')	8/20/94	0 - 2	Explosives[d], General Chemistry, Metals[c], SVOC, VOC
11WW03	11WW03 (0-2')	8/21/94	0 - 2	Explosives[d], General Chemistry, Metals[c], SVOC, VOC
27SB03	27SB03 (0-0.5)	10/4/00	0 - 0.5	General Chemistry, Perchlorate
27SB03	27SB03 (0-0.5)QC	10/4/00	0 - 0.5	General Chemistry, Perchlorate
27SB03	27SB03 (1-2)	10/4/00	1 - 2	General Chemistry, Perchlorate
27SB05	27SB05 (0-0.5)	10/4/00	0 - 0.5	General Chemistry, Perchlorate
27SB05	27SB05 (0-0.5)QC	10/4/00	0 - 0.5	General Chemistry, Perchlorate
27SB05	27SB05 (1-2)	10/4/00	1 - 2	General Chemistry, Perchlorate
27SB11	27SB11 (0-0.5)	10/4/00	0 - 0.5	General Chemistry, Perchlorate
27SB11	27SB11 (0-0.5)QC	10/4/00	0 - 0.5	General Chemistry, Perchlorate
27SB11	27SB11 (1-2)	10/4/00	1 - 2	General Chemistry, Perchlorate
27SB34	LH27-SB34(0-3)	3/19/93	0 - 3	Explosives, General Chemistry, Metals[c], SVOC, VOC
27SB34	LH27-SB34(0-3)QQC	3/19/93	0 - 3	Explosives, General Chemistry, Metals[c], SVOC, VOC
27SB38	LH27-SB38(0-2)	3/20/93	0 - 2	Explosives, General Chemistry, Metals[c], Pest/PCB, SVOC, VOC
27WW01	27WW01 (0-2')	8/18/94	0 - 2	Explosives[d], General Chemistry, Metals[c]
400ASS01	400ASS01(0-0.5)	7/26/98	0 - 0.5	PAH
400ASS01	400ASS01(0-0.5)QC	7/26/98	0 - 0.5	PAH
400ASS02	400ASS02(0-0.5)	7/26/98	0 - 0.5	PAH
400ASS03	400ASS03(0-0.5)	7/26/98	0 - 0.5	PAH
400ASS04	400ASS04(0-0.5)	7/26/98	0 - 0.5	PAH
400ASS05	400ASS05(0-0.5)	7/26/98	0 - 0.5	PAH
400ASS06	400ASS06(0-0.5)	7/26/98	0 - 0.5	PAH
400ASS06	C981204-400ASS06-N00	12/4/98	0 - 0.5	PAH
FWS-003	C-SS-003	8/27/02	0 - 0.5	Metals, Pesticides, SVOC
FWS-004	C-SS-004	8/27/02	0 - 0.5	Metals, Pesticides, SVOC
FWS-005	C-SS-005	8/27/02	0 - 0.5	Dioxin/Furans, Metals, Pesticides, SVOC
FWS-041	C-SS-041	9/25/02	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-042	C-SS-042	9/25/02	0 - 0.5	Dioxin/Furans, Metals, Pest/PCB, SVOC
FWS-043	C-SS-043	9/25/02	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-050	CLNWR050	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-051	CLNWR051	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-055	CLNWR055	9/9/03	0 - 0.5	Dioxin/Furans, Metals, Pest/PCB, SVOC
FWS-056	CL056DUP	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-056	CLNWR056	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-062	CLNWR062	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-063	CLNWR063	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-073	CLNWR073	9/9/03	0 - 0.5	Dioxin/Furans, Metals, Pest/PCB, SVOC
FWS-074	CLNWR074	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-075	CL075DUP	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-075	CLNWR075	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-076	CLNWR076	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-077	CLNWR077	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-078	CLNWR078	9/9/03	0 - 0.5	Dioxin/Furans, Metals, Pest/PCB, SVOC
FWS-079	CLNWR079	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-080	CLNWR080	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-081	CLNWR081	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-082	CLNWR082	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-083	CLNWR083	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-084	CLNWR084	9/9/03	0 - 0.5	Dioxin/Furans, Metals, Pest/PCB, SVOC
FWS-085	CLNWR085	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-086	CLNWR086	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-087	CLNWR087	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-095	CLNWR095	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-098	CLNWR098	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-102	CLNWR102	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-103	CLNWR103	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-104	CLNWR104	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-105	CLNWR105	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-106	CLNWR106	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC

Table 6-3
Sample Summary for Total Soil
Low Impact Sub-Area

Location	Sample No [a]	Date	Depth (ft bgs)	Analyses
FWS-107	CLNWR107	9/9/03	0 - 0.5	Dioxin/Furans, Metals, Pest/PCB, SVOC
FWS-109	CLNWR109	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-110	CLNWR110	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-111	CLNWR111	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-120	CLNWR120	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-127	CLNWR127	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-136	CLNWR136	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-140	CL140DUP	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-140	CLNWR140	9/9/03	0 0.5	Metals, Pest/PCB, SVOC
FWS-141	CLNWR141	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-142	CLNWR142	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-143	CLNWR143	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-144	CLNWR144	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-145	CLNWR145	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-146	CLNWR146	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-147	CLNWR147	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-148	CLNWR148	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-150	CLNWR150	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-151	CLNWR151	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-152	CL152DUP	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-152	CLNWR152	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-155	CLNWR155	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-156	CLNWR156	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-158	CLNWR158	9/9/03	0 - 0.5	Dioxin/Furans, Metals, Pest/PCB, SVOC
FWS-159	CLNWR159	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-169	CLNWR169	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-172	CLNWR172	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-173	CLNWR173	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-174	CLNWR174	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-175	CLNWR175	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-179	CLNWR179	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-181	CLNWR181	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-183	CLNWR183	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-184	CLNWR184	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-185	CLNWR185	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-186	CL186DUP	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-186	CLNWR186	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-187	CLNWR187	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-188	CLNWR188	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-197	CLNWR197	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-198	CLNWR198	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-199	CLNWR199	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-200	CL200DUP	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-200	CLNWR200	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-201	CL201DUP	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-201	CLNWR201	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-202	CLNWR202	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-203	CLNWR203	9/9/03	0 - 0.5	Dioxin/Furans, Metals, Pest/PCB, SVOC
FWS-204	CLNWR204	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-205	CLNWR205	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-206	CLNWR206	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-207	CLNWR207	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-208	CLNWR208	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-209	CL209DUP	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-209	CLNWR209	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-210	CLNWR210	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-211	CLNWR211	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-212	CLNWR212	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-213	CLNWR213	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-214	CL214DUP	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-214	CLNWR214	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-216	CLNWR216	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-217	CLNWR217	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-218	CLNWR218	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-219	CLNWR219	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-223	CLNWR223	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-226	CLNWR226	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-228	CLNWR228	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-232	CLNWR232	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-235	CLNWR235	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-236	CLNWR236	9/9/03	0 - 0.5	Dioxin/Furans, Metals, Pest/PCB, SVOC
FWS-237	CLNWR237	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC

Table 6-3
Sample Summary for Total Soil
Low Impact Sub-Area

Location	Sample No [a]	Date	Depth (ft bgs)	Analyses
FWS-238	CL238DUP	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-238	CLNWR238	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-239	CLNWR239	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-240	CLNWR240	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-241	CLNWR241	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-242	CLNWR242	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-243	CLNWR243	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-244	CLNWR244	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-245	CLNWR245	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
HOSB17	HOSB17(0-0.5)	12/6/00	0 - 0.5	TPH
HOSB18	HOSB18(0-0.5)	12/6/00	0 - 0.5	TPH
LAP-31M1	LAP-31M1	7/12/00	0 - 0.5	Explosives, Metals, Perchlorate, SVOC
LAP-31M2	LAP-31M2	7/12/00	0 - 0.5	Explosives, Metals, Perchlorate, SVOC
LAP-35M2	LAP-35M2	7/12/00	0 - 0.5	Explosives, Metals, Perchlorate, SVOC
LAP-39M1	LAP-39M1	7/12/00	0 - 0.5	Explosives, Metals, Perchlorate, SVOC
LAP-81103	LAP-81103	7/10/00	0 - 0.5	Explosives, Metals, Perchlorate, SVOC
LAP-81105	LAP-81105	7/10/00	0 - 0.5	Explosives, Metals, Perchlorate, SVOC
LAP-81109	LAP-81109	7/10/00	0 - 0.5	Explosives, Metals, Perchlorate, SVOC
LAP-81124	LAP-81124	7/10/00	0 - 0.5	Explosives, Metals, Perchlorate, SVOC
LAP-81127	LAP-81127	7/10/00	0 - 0.5	Explosives, Metals, Perchlorate, SVOC
LAP-81129	LAP-81129	7/10/00	0 - 0.5	Explosives, Metals, Perchlorate, SVOC
LAP-81130	LAP-81130	7/10/00	0 - 0.5	Explosives, Metals, Perchlorate, SVOC
LAP-81146	LAP-81146	7/12/00	0 - 0.5	Metals, Perchlorate, SVOC
LAP-81147	LAP-81147	7/12/00	0 - 0.5	Metals, Perchlorate, SVOC
LAP-81152	LAP-81152	7/10/00	0 - 0.5	Explosives, Metals, Perchlorate, SVOC
LAP-81152	LAP-81152-FD	7/10/00	0 - 0.5	Explosives
LAP-81155	LAP-81155	7/10/00	0 - 0.5	Explosives, Metals, Perchlorate, SVOC
LAP-81156	LAP-81156	7/10/00	0 - 0.5	Explosives, Metals, Perchlorate, SVOC
LAP-81158	LAP-81158	7/12/00	0 - 0.5	Explosives, Metals, Perchlorate, SVOC
XXSB15	LHXX-SB15(0-2)	3/9/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
XXSB16	C940822-XXSB16-N00	8/22/94	0 - 0	Barium, lead, selenium
XXSB16	LHXX-SB16(0-3)	3/9/93	0 - 3	Explosives, General Chemistry, Metals[c], SVOC, VOC
XXSB17	C940911-XXSB17-N00	9/11/94	0 - 0	Explosives[d], General Chemistry, Metals[c], SVOC, VOC
XXSB17	LHXX-SB17(0-2)	3/9/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
XXSB18	C940822-XXSB18-N00	8/22/94	0 - 0	Barium, lead, selenium
XXSB18	LHXX-SB18 (0-2)	3/10/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
XXSB19	C940822-XXSB19-N00	8/22/94	0 - 0	Barium, lead, selenium
XXSB19	LHXX-SB19(0-2.5	3/9/93	0 - 2.5	Explosives, General Chemistry, Metals[c], SVOC, VOC
XXSB20	C940823-XXSB20-N00	8/23/94	0 - 0	Explosives[d], General Chemistry, Metals[c], SVOC, VOC
XXSB20	LHXX-SB20(0-2.5	3/10/93	0 - 2.5	Explosives, General Chemistry, Metals[c], SVOC, VOC
XXSB21	C940823-XXSB21-N00	8/23/94	0 - 0	Chromium, Mercury
XXSB21	LHXX-SB21(0-2.5	3/10/93	0 - 2.5	Explosives, General Chemistry, Metals[c], SVOC, VOC
XXSB21	LHXX-SB21(0-2.5QC	3/10/93	0 - 2.5	Explosives, General Chemistry, Metals[c], SVOC, VOC
XXSD16	LHXX-SD16	3/31/93	0 - 0	Explosives, General Chemistry, Metals[c], SVOC, VOC

Notes:

General Chemistry parameters include: chloride, conductivity, nitrate, sulfate, pH, percent solids, and total solids. Samples may not have been analyzed for all parameters.

[a] Field duplicates are indicated by the addition of "QC", "QQC", "DUP", or "FD" to the sample number.

[b] Total soil is defined as samples 0 to 3 feet bgs. Deeper samples were also considered surface soil if at least 50% of their sampling depth interval was less than 3 ft bgs (e.g., 2-4 ft bgs).

[c] Metals analysis for antimony, arsenic, barium, cadmium, chromium, lead, mercury, nickel, selenium, silver, and thallium only.

[d] Explosives data from ITS laboratory were of questionable quality, and were not used.

PAH Polynuclear aromatic hydrocarbons
PCB Polychlorinated biphenyls
Pest Pesticides
SVOC Semivolatile organic compounds
TPH Total petroleum hydrocarbons
VOC Volatile organic compounds

Table 6-4
Sample Summary for Total Soil
Waste Sub-Area

Location	Sample No [a]	Date	Depth (ft bgs)	Analyses
Total Soil [b]				
12SB01	12SB01(1.0-2.0)	6/1/93	1 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
12SB06	12SB06(0-0.5)	5/31/00	0 - 0.5	Perchlorate
12SB06	12SB06(1-2)	5/31/00	1 - 2	Perchlorate
12SB08	12SB08(0-0.5)	5/31/00	0 - 0.5	Perchlorate
12SB09	12SB09(0-0.5)	5/31/00	0 - 0.5	Perchlorate
12WW01	12WW01(0-2)	4/27/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
12WW02	12WW02(0-2)	2/4/88	0 - 2	SVOC
12WW02	C900204-12WW02-N02	2/4/90	0 - 2	SVOC
12WW02	C930428-12WW02-N02	4/28/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
12WW05	12WW05(0-1.5)	4/19/93	0 - 1.5	Explosives, General Chemistry, Metals[c], SVOC, VOC
12WW07	12WW07(0-2)	4/19/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
16SB11	16SB11(0-0.5)	6/1/00	0 - 0.5	Perchlorate
16SB11	16SB11(1-2)	6/1/00	1 - 2	Perchlorate
16SD02	16SD02(0-1)	4/14/93	0 - 1	Explosives, General Chemistry, Metals[c], SVOC, VOC
16SD02	16SD02(000.0)	2/28/95	0 - 0	Explosives[d], Metals[e], VOC
16SD11	16SD11(000.0)	2/28/95	0 - 0	Explosives[d], Metals[e], VOC
16WW27	16WW27(0-0.5)	5/17/97	0 - 0.5	Dioxin/Furans, Explosives, General Chemistry, Metals, Pest/PCB, VOC
16WW27	16WW27(0-0.5)QC	5/17/97	0 - 0.5	General Chemistry
16WW27	16WW27(1-3)	5/17/97	1 - 3	Dioxin/Furans, Explosives, General Chemistry, Metals, Pest/PCB, VOC
16WW31	16WW31(0-0.5)	5/29/97	0 - 0.5	Dioxin/Furans, Explosives, General Chemistry, Metals, Pest/PCB, VOC
16WW31	16WW31(1-3)	5/29/97	1 - 3	Dioxin/Furans, Explosives, General Chemistry, Metals, Pest/PCB, VOC
16WW35	16WW35(0-0.5)	6/25/97	0 - 0.5	Dioxin/Furans, Explosives, General Chemistry, Metals, Pest/PCB, VOC
16WW35	16WW35(0-0.5)QC	6/25/97	0 - 0.5	Dioxin/Furans, Explosives, General Chemistry, Metals, Pest/PCB, VOC
16WW35	16WW35(1-3)	6/25/97	1 - 3	Dioxin/Furans, Explosives, General Chemistry, Metals, Pest/PCB, VOC
16WW37	16WW37(0-0.5)	5/31/97	0 - 0.5	Dioxin/Furans, Explosives, General Chemistry, Metals, Pest/PCB, VOC
16WW37	16WW37(1-3)	5/31/97	1 - 3	Dioxin/Furans, Explosives, General Chemistry, Metals, Pest/PCB, VOC
17SB01	17SB01(02)	5/15/93	2.5 - 2.5	Explosives, General Chemistry, Metals[c], SVOC, VOC
17SB01	17SB01(0-2)	5/15/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
17SB02	17SB02(0-2)	5/15/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
17SB03	17SB03(0-2)	5/16/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
17SB03	17SB03-QC	5/16/93	2.5 - 2.5	General Chemistry
17SB04	17SB04(0-2)	5/15/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
17SB05	17SB05(0-2)	5/16/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
17SB06	17SB06(0-2)	5/15/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
17SB07	17SB07(0-2)	5/16/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
17SB09	17SB09(0-0.5)	5/30/00	0 - 0.5	Perchlorate
17SB09	17SB09(1-2)	5/30/00	1 - 2	Perchlorate
17SB10	17SB10(0-0.5)	5/30/00	0 - 0.5	Perchlorate
17SB10	17SB10(1-2)	5/30/00	1 - 2	Perchlorate
17SD01	17SD01	4/21/93	0 - 0	Explosives, General Chemistry, Metals[c], SVOC, VOC
17SD01	17SD01(000.0)	3/2/95	0 - 0	Explosives[d], Metals[e], VOC
17SD02	17SD02	4/21/93	0 - 0	Explosives, General Chemistry, Metals, SVOC, VOC
17SD02	17SD02(000.0)/FD	3/4/95	0 - 0	Explosives[d], Metals[e], VOC
17SD02	17SD02(000.0)QC	3/4/95	0 - 0	Explosives[d], Metals[e]
17SD02	17SD02QC (000.0	3/4/95	0 - 0	VOC
17SD04	17SD04(000.0)	3/3/95	0 - 0	Explosives[d], Metals[e], VOC
17SD05	17SD05(000.0)	3/2/95	0 - 0	Explosives[d], Metals[e], VOC
17SD06	17SD06(000.0)	3/2/95	0 - 0	Explosives[d], Metals[e], VOC
17SD07	17SD07(000.0)	3/3/95	0 - 0	Explosives[d], Metals[e], VOC
17SD08	17SD08(000.0)	3/5/95	0 - 0	Explosives[d], Metals[e], VOC
17SD09	17SD09(000.0)	3/5/95	0 - 0	Explosives[d], Metals[e], VOC
17SD10	17SD10	9/17/98	0 - 0	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
17SD10	17SD10QC	9/17/98	0 - 0	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
17SD11	17SD11	9/17/98	0 - 0	Explosives, Metals, VOC
17SD12	17SD12	9/17/98	0 - 0	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
17SS01	17SS01(000.0)	3/3/95	0.5 - 0.5	Explosives[d], Metals[c], VOC
17SS02	17SS02(000.0)	3/3/95	0.5 - 0.5	Explosives[d], Metals[c], VOC
17SS03	17SS03(000.0)	3/3/95	0.5 - 0.5	Explosives[d], Metals[c], VOC
17SS04	17SS04(000.0)	3/3/95	0.5 - 0.5	Explosives[d], Metals[c], VOC
17SS05	17SS05(000.0)	3/3/95	0.5 - 0.5	Explosives[d], Metals[c], VOC
17SS08	17SS08(000.0)	3/3/95	0.5 - 0.5	Explosives[d], Metals[c], VOC

Table 6-4
Sample Summary for Total Soil
Waste Sub-Area

Location	Sample No [a]	Date	Depth (ft bgs)	Analyses
17SS09	17SS09(000.0)	3/5/95	0.5 - 0.5	Explosives[d], Metals[c], VOC
17SS10	17SS10(000.0)	3/15/95	0 - 0.5	Explosives[d], Metals[c], VOC
17SS12	17SS12(000.0)	3/5/95	0.5 - 0.5	Explosives[d], Metals[c], VOC
17SS13	17SS13(000.0)	3/4/95	0.5 - 0.5	Explosives[d], Metals[c], VOC
17SS13	17SS13(000.0)QC	3/4/95	0.5 - 0.5	Explosives[d], Metals[c]
17SS13	17SS13QC (000.0	3/4/95	0.5 - 0.5	VOC
17SS14	17SS14 (000.0)QQC	3/1/95	0.5 - 0.5	VOC
17SS14	17SS14(000.0)	3/1/95	0.5 - 0.5	Explosives[d], Metals[c], VOC
17SS14	17SS14(000.0)QC	3/1/95	0.5 - 0.5	Explosives[d], Metals[c]
17SS15	17SS15(000.0)	3/5/95	0.5 - 0.5	Explosives[d], Metals[c], VOC
17SS16	17SS16(000.0)	3/5/95	0.5 - 0.5	Explosives[d], Metals[c], VOC
17SS17	17SS17(000.0)	3/1/95	0.5 - 0.5	Explosives[d], Metals[c], VOC
17SS18	17SS18(000.0)	3/2/95	0.5 - 0.5	Explosives[d], Metals[c], VOC
17SS19	17SS19(000.0)	3/2/95	0.5 - 0.5	Explosives[d], Metals[c], VOC
17SS20	17SS20(000.0)	3/2/95	0.5 - 0.5	Explosives[d], Metals[c], VOC
17SS21	17SS21(0-0.5)	7/11/98	0 - 0.5	Explosives
17SS21	17SS21(0-0.5)QC	7/11/98	0 - 0.5	Explosives
17SS21	17SS21(2.5-3)	7/11/98	2.5 - 3	Explosives
17SS22	17SS22(0-0.5)	7/11/98	0 - 0.5	Dioxin/Furans, Explosives, Pest/PCB, SVOC
17SS22	17SS22(1-3)-980711	7/11/98	1 - 3	Dioxin/Furans, Explosives, Pest/PCB, SVOC
17SS22	17SS22(0-0.5)A	8/20/98	0 - 0.5	Metals, VOC
17SS22	17SS22(1-3)-980820	8/20/98	1 - 3	Metals, VOC
17SS23	17SS23(0-0.5)	7/11/98	0 - 0.5	Explosives
17SS23	17SS23(2.5-3)	7/11/98	2.5 - 3	Explosives
17SS24	17SS24(0-0.5)	7/11/98	0 - 0.5	Explosives
17SS24	17SS24(2.5-3)	7/11/98	2.5 - 3	Explosives
17SS25	17SS25(0-0.5)	7/11/98	0 - 0.5	Explosives
17SS25	17SS25(2.5-3)	7/11/98	2.5 - 3	Explosives
17SS26	C-17SS26(0-0.5)-9807	7/11/98	0 - 0.5	Dioxin/Furans, Explosives, Pest/PCB, SVOC
17SS26	C-17SS26(1-3)-980711	7/11/98	1 - 3	Dioxin/Furans, Explosives, Pest/PCB, SVOC
17SS26	C-17SS26(0-0.5)-9808	8/20/98	0 - 0.5	Metals, VOC
17SS26	C-17SS26(1-3)-980820	8/20/98	1 - 3	Metals, VOC
17SS27	17SS27(0-0.5)	7/11/98	0 - 0.5	Explosives
17SS27	17SS27(2.5-3)	7/11/98	2.5 - 3	Explosives
17SS28	17SS28(0-0.5)	7/11/98	0 - 0.5	Explosives
17SS28	17SS28(2.5-3)	7/11/98	2.5 - 3	Explosives
17SS29	17SS29(0-0.5)	7/11/98	0 - 0.5	Explosives
17SS29	17SS29(2.5-3)	7/11/98	2.5 - 3	Explosives
17SS31	17SS31(0-0.5)	7/14/98	0 - 0.5	Explosives
17SS31	17SS31(2.5-3)	7/14/98	2.5 - 3	Explosives
17SS31	17SS31(2.5-3)QC	7/14/98	2.5 - 3	Explosives
17WW01	17WW01(0-2)	5/16/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
18SD03	18SD03(0-0.5)	5/2/93	0 - 0.5	Explosives, General Chemistry, Metals[c], SVOC, VOC
18SD04	18SD04(0-0.5)	5/2/93	0 - 0.5	Explosives, General Chemistry, Metals[c], SVOC, VOC
18SD05	18SD05(0-0.5)	5/2/93	0 - 0.5	Explosives, General Chemistry, Metals[c], SVOC, VOC
18SD06	18SD06(0-0.5)	5/2/93	0 - 0.5	Explosives, General Chemistry, Metals[c], SVOC, VOC
18SD06	18SD06(0-0.5)QC	5/2/93	0 - 0.5	General Chemistry, Metals[c], SVOC, VOC
18SD07	18SD07(0-0.5)	5/2/93	0 - 0.5	Explosives, General Chemistry, Metals[c], SVOC, VOC
18SD07	18SD07(0-0.5)QC	5/2/93	0 - 0.5	Explosives
18SD08	18SD08(0-0.5)	5/2/93	0 - 0.5	Explosives, General Chemistry, Metals[c], SVOC, VOC
18SD09	18SD09(000.0)	2/18/95	0 - 0	Metals[e], VOC
18SD10	18SD10(000.0)	2/18/95	0 - 0	Metals[e], VOC
18SD11	18SD11(000.0)	2/18/95	0 - 0	Metals[e], VOC
18SD29	18SD29	10/7/98	0 - 0	Dioxin/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
18SS01	18SS01(000.0)	3/19/95	0 - 0	Metals[c], VOC
18SS02	18SS02(000.0)	3/17/95	0 - 0	Metals[c]
18SS03	18SS03 (000.0)	3/17/95	0 - 0	Metals[c], VOC
18SS05	18SS05 (000.0)	3/20/95	0 - 0	Metals[c], VOC
18SS06	18SS06(000.0)	3/17/95	0 - 0	Metals[c]
18SS07	18SS07(000.0)	3/19/95	0 - 0	Metals[c], VOC
18SS08	18SS08(000.0)	3/19/95	0 - 0	Metals[c]
18SS09	18SS09(000.0)	3/19/95	0 - 0	Metals[c], VOC

Table 6-4
Sample Summary for Total Soil
Waste Sub-Area

Location	Sample No [a]	Date	Depth (ft bgs)	Analyses
18SS10	18SS10(000.0)	3/19/95	0 - 0	Metals[c]
18SS11	18SS11 (000.0)	3/19/95	0 - 0	Metals[c], VOC
18SS12	18SS12(000.0)	3/5/95	0 - 0	Metals[c], VOC
18SS12	18SS12(000.0)QC	3/5/95	0 - 0	Metals[c], VOC
18SS13	18SS13(000.0)	3/17/95	0 - 0	Metals[c]
18SS14	18SS14(000.0)	3/17/95	0 - 0	Metals[c]
18SS15	18SS15(000.0)	3/17/95	0 - 0	Metals[c]
18SS16	18SS16 (000.0)	3/19/95	0 - 0	Metals[c], VOC
18SS17	18SS17(000.0)	3/5/95	0 - 0	Metals[c], VOC
18SS18	18SS18(000.0)	3/18/95	0 - 0	Metals[c]
18SS19	18SS19 (000.0)	3/19/95	0 - 0	Metals[c], VOC
18SS20	18SS20(000.0)	3/19/95	0 - 0	Metals[c]
18SS21	18SS21 (000.0)	3/18/95	0 - 0	Metals[c], VOC
18SS21	18SS21(000.0)QC	3/18/95	0 - 0	Metals[c], VOC
18SS22	18SS22(000.0)	3/18/95	0 - 0	Metals[c]
18SS23	18SS23(000.0)	3/5/95	0 - 0	Metals[c], VOC
18SS24	18SS24(000.0)	3/5/95	0 - 0	Metals[c], VOC
18SS25	18SS25 (000.0)	3/18/95	0 - 0	Metals[c], VOC
COE17-02	COE17-02-01	9/1/98	0 - 0.5	Explosives
COE17-03	COE17-03-01	9/1/98	0 - 0.5	Explosives
COE17-03	COE17-03-01QC	9/1/98	0 - 0.5	Explosives
COE17-04	COE17-04-01	9/1/98	0 - 0.5	Explosives
COE17-05	COE17-05-01	9/1/98	0 - 0.5	Explosives
COE17-06	COE17-06-01	9/1/98	0 - 0.5	Explosives
COE17-07	COE17-07-01	9/1/98	0 - 0.5	Explosives
COE17-08	COE17-08-01	9/1/98	0 - 0.5	Explosives
COE17-09	COE17-09-01	9/1/98	0 - 0.5	Explosives
COE17-10	COE17-10-01	9/1/98	0 - 0.5	Explosives
COE17-11	COE17-11-01	9/1/98	0 - 0.5	Explosives
COE17-12	COE17-12-01	9/1/98	0 - 0.5	Explosives
COE17-13	COE17-13-01	9/1/98	0 - 0.5	Explosives
COE17-14	COE17-14-01	9/1/98	0 - 0.5	Explosives
COE17-15	COE17-15-01	9/1/98	0 - 0.5	Explosives
COE17-16	COE17-16-01	9/1/98	0 - 0.5	Explosives
FWS-088	CLNWR088	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-101	CLNWR101	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-108	CLNWR108	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-119	CLNWR119	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-123	CLNWR123	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
FWS-124	CLNWR124	9/9/03	0 - 0.5	Metals, Pest/PCB, SVOC
LH-S114-01	LH-S114-01_1	7/13/93	0.5 - 1.5	Explosives, Metals, SVOC, VOC
LH-S114-02	LH-S114-02_1	7/13/93	0.5 - 1.5	Explosives, Metals, SVOC, VOC
LH-S115-01	LH-S115-01_1	8/4/93	0.5 - 1	Metals, SVOC, VOC
LH-S115-02	LH-S115-02 QC	8/4/93	0.6 - 2.6	Metals, SVOC, VOC
LH-S115-02	LH-S115-02_1	8/4/93	0.6 - 2.6	Metals, SVOC, VOC
STEP-17SS01	17SS01(0-0.5)-02	3/6/02	0 - 0.5	Perchlorate
STEP-17SS01	17SS01(0-0.5)-02_QC	3/6/02	0 - 0.5	Perchlorate
STEP-17SS01	17SS01(1-2)-020306	3/6/02	1 - 2	Perchlorate
STEP-17SS02	17SS02(0-0.5)-020306	3/6/02	0 - 0.5	Perchlorate
STEP-17SS02	17SS02(1-2)-020306	3/6/02	1 - 2	Perchlorate
STEP-17SS03	17SS03(0-0.5)-020306	3/6/02	0 - 0.5	Perchlorate
STEP-17SS03	17SS03(1-2)-020306	3/6/02	1 - 2	Perchlorate
STEP-17SS04	17SS04(0-0.5)-020306	3/6/02	0 - 0.5	Perchlorate
STEP-17SS04	17SS04(1-2)-020306	3/6/02	1 - 2	Perchlorate
STEP-17SS05	17SS05(0-0.5)-020306	3/6/02	0 - 0.5	Perchlorate
STEP-17SS05	17SS05(1-2)-020306	3/6/02	1 - 2	Perchlorate
STEP-17SS06	17SS06(0-0.5)-02	3/6/02	0 - 0.5	Perchlorate
STEP-17SS06	17SS06(0-0.5)-02_QC	3/6/02	0 - 0.5	Perchlorate
STEP-17SS06	17SS06(1-2)-020306	3/6/02	1 - 2	Perchlorate
STEP-17SS07	17SS07(0-0.5)-020306	3/6/02	1 - 2	Perchlorate
STEP-17SS07	17SS07(1-2)-020306	3/6/02	0 - 0.5	Perchlorate
STEP-17SS08	17SS08(0-0.5)-020306	3/6/02	0 - 0.5	Perchlorate
STEP-17SS08	17SS08(1-2)-020306	3/6/02	1 - 2	Perchlorate
STEP-17SS09	17SS09(0-0.5)-020306	3/6/02	1 - 2	Perchlorate
STEP-17SS09	17SS09(1-2)-020306	3/6/02	0 - 0.5	Perchlorate

Table 6-4
Sample Summary for Total Soil
Waste Sub-Area

Location	Sample No [a]	Date	Depth (ft bgs)	Analyses
STEP-17SS10	17SS10(0-0.5)-020306	3/6/02	0 - 0.5	Perchlorate
STEP-17SS10	17SS10(1-2)-020306	3/6/02	1 - 2	Perchlorate
STEP-17SS11	17SS11(0-0.5)-02	3/6/02	0 - 0.5	Perchlorate
STEP-17SS11	17SS11(0-0.5)-02_QC	3/6/02	0 - 0.5	Perchlorate
STEP-17SS11	17SS11(1-2)-020306	3/6/02	1 - 2	Perchlorate
STEP-17SS12	17SS12(0-0.5)-020306	3/6/02	0 - 0.5	Perchlorate
STEP-17SS12	17SS12(1-2)-020306	3/6/02	1 - 2	Perchlorate
STEP-17SS13	17SS13(0-0.5)-020307	3/7/02	0 - 0.5	Perchlorate
STEP-17SS13	17SS13(1-2)-020307	3/7/02	1 - 2	Perchlorate
STEP-17SS14	17SS14(0-0.5)-020307	3/7/02	0 - 0.5	Perchlorate
STEP-17SS14	17SS14(1-2)-020307	3/7/02	1 - 2	Perchlorate
STEP-17SS15	17SS15(0-0.5)-020307	3/7/02	0 - 0.5	Perchlorate
STEP-17SS15	17SS15(1-2)-020307	3/7/02	1 - 2	Perchlorate
STEP-17SS16	17SS16(0-0.5)-02	3/7/02	0 - 0.5	Perchlorate
STEP-17SS16	17SS16(0-0.5)-02_QC	3/7/02	0 - 0.5	Perchlorate
STEP-17SS16	17SS16(1-2)-020307	3/7/02	1 - 2	Perchlorate
STEP-17SS17	17SS17(0-0.5)-020307	3/7/02	0 - 0.5	Perchlorate
STEP-17SS17	17SS17(1-2)-020307	3/7/02	1 - 2	Perchlorate
STEP-17SS18	17SS18(0-0.5)-020307	3/7/02	0 - 0.5	Perchlorate
STEP-17SS18	17SS18(1-2)-020307	3/7/02	1 - 2	Perchlorate
STEP-17SS19	17SS19(0-0.5)-020307	3/7/02	0 - 0.5	Perchlorate
STEP-17SS19	17SS19(1-2)-020307	3/7/02	1 - 2	Perchlorate
STEP-17SS20	17SS20(0-0.5)-020307	3/7/02	0 - 0.5	Perchlorate
STEP-17SS20	17SS20(1-2)-020307	3/7/02	1 - 2	Perchlorate
STEP-17SS21	17SS21(0-0.5)-02	3/7/02	0 - 0.5	Perchlorate
STEP-17SS21	17SS21(0-0.5)-02_QC	3/7/02	0 - 0.5	Perchlorate
STEP-17SS21	17SS21(1-2)-020307	3/7/02	1 - 2	Perchlorate
STEP-17SS22	17SS22(0-0.5)-020307	3/7/02	0 - 0.5	Perchlorate
STEP-17SS22	17SS22(1-2)-020307	3/7/02	1 - 2	Perchlorate
STEP-17SS23	17SS23(0-0.5)-020307	3/7/02	0 - 0.5	Perchlorate
STEP-17SS23	17SS23(1-2)-020307	3/7/02	1 - 2	Perchlorate
STEP-17SS24	17SS24(0-0.5)-020307	3/7/02	0 - 0.5	Perchlorate
STEP-17SS24	17SS24(1-2)-020307	3/7/02	1 - 2	Perchlorate
STEP-17SS25	17SS25(0-0.5)-020307	3/7/02	0 - 0.5	Perchlorate
STEP-17SS25	17SS25(1-2)-020307	3/7/02	1 - 2	Perchlorate
STEP-17SS26	17SS26(0-0.5)-02	3/7/02	0 - 0.5	Perchlorate
STEP-17SS26	17SS26(0-0.5)-02_QC	3/7/02	0 - 0.5	Perchlorate
STEP-17SS26	17SS26(1-2)-020307	3/7/02	1 - 2	Perchlorate
STEP-17SS27	17SS27(0-0.5)-020307	3/7/02	0 - 0.5	Perchlorate
STEP-17SS27	17SS27(1-2)-020307	3/7/02	1 - 2	Perchlorate
STEP-17SS28	17SS28(0-0.5)-020307	3/7/02	0 - 0.5	Perchlorate
STEP-17SS28	17SS28(1-2)-020307	3/7/02	1 - 2	Perchlorate
STEP-17SS29	17SS29(0-0.5)-020307	3/7/02	0 - 0.5	Perchlorate
STEP-17SS29	17SS29(1-2)-020307	3/7/02	1 - 2	Perchlorate
STEP-17SS30	17SS30(0-0.5)-020307	3/7/02	0 - 0.5	Perchlorate
STEP-17SS30	17SS30(1-2)-020307	3/7/02	1 - 2	Perchlorate
STEP-17SS31	17SS31(0-0.5)-02	3/7/02	0 - 0.5	Perchlorate
STEP-17SS31	17SS31(0-0.5)-02_QC	3/7/02	0 - 0.5	Perchlorate
STEP-17SS31	17SS31(1-2)-020307	3/7/02	1 - 2	Perchlorate
STEP-17SS32	17SS32(0-0.5)-020307	3/7/02	0 - 0.5	Perchlorate
STEP-17SS32	17SS32(1-2)-020307	3/7/02	1 - 2	Perchlorate
STEP-17SS33	17SS33(0-0.5)-020307	3/7/02	0 - 0.5	Perchlorate
STEP-17SS33	17SS33(1-2)-020307	3/7/02	1 - 2	Perchlorate
STEP-17SS34	17SS34(0-0.5)-020308	3/8/02	0 - 0.5	Perchlorate
STEP-17SS34	17SS34(1-2)-020308	3/8/02	1 - 2	Perchlorate
STEP-17SS35	17SS35(0-0.5)-020308	3/8/02	0 - 0.5	Perchlorate
STEP-17SS35	17SS35(1-2)-020308	3/8/02	1 - 2	Perchlorate
STEP-17SS36	17SS36(0-0.5)-02	3/8/02	0 - 0.5	Perchlorate
STEP-17SS36	17SS36(0-0.5)-02_QC	3/8/02	0 - 0.5	Perchlorate
STEP-17SS36	17SS36(1-2)-020308	3/8/02	1 - 2	Perchlorate
STEP-17SS37	17SS37(0-0.5)-020308	3/8/02	0 - 0.5	Perchlorate
STEP-17SS37	17SS37(1-2)-020308	3/8/02	1 - 2	Perchlorate
STEP-17SS38	17SS38(0-0.5)-020308	3/8/02	0 - 0.5	Perchlorate
STEP-17SS38	17SS38(1-2)-020308	3/8/02	1 - 2	Perchlorate
STEP-17SS39	17SS39(0-0.5)-020308	3/8/02	0 - 0.5	Perchlorate
STEP-17SS39	17SS39(1-2)-020308	3/8/02	1 - 2	Perchlorate
STEP-17SS40	17SS40(0-0.5)-020308	3/8/02	0 - 0.5	Perchlorate
STEP-17SS40	17SS40(1-2)-020308	3/8/02	1 - 2	Perchlorate

Table 6-4
Sample Summary for Total Soil
Waste Sub-Area

Location	Sample No [a]	Date	Depth (ft bgs)	Analyses
STEP-17SS41	17SS41(0-0.5)-02	3/8/02	0 - 0.5	Perchlorate
STEP-17SS41	17SS41(0-0.5)-02_QC	3/8/02	0 - 0.5	Perchlorate
STEP-17SS41	17SS41(1-2)-020308	3/8/02	1 - 2	Perchlorate
STEP-17SS42	17SS42(0-0.5)-020308	3/8/02	0 - 0.5	Perchlorate
STEP-17SS42	17SS42(1-2)-020308	3/8/02	1 - 2	Perchlorate
STEP-17SS43	17SS43(0-0.5)-020308	3/8/02	0 - 0.5	Perchlorate
STEP-17SS43	17SS43(1-2)-020308	3/8/02	1 - 2	Perchlorate
STEP-17SS44	17SS44(0-0.5)-020308	3/8/02	0 - 0.5	Perchlorate
STEP-17SS44	17SS44(1-2)-020308	3/8/02	1 - 2	Perchlorate
STEP-17SS45	17SS45(0-0.5)-020308	3/8/02	0 - 0.5	Perchlorate
STEP-17SS45	17SS45(1-2)-020308	3/8/02	1 - 2	Perchlorate
STEP-17SS46	17SS46(0-0.5)-02	3/8/02	0 - 0.5	Perchlorate
STEP-17SS46	17SS46(0-0.5)-02_QC	3/8/02	0 - 0.5	Perchlorate
STEP-17SS46	17SS46(1-2)-020308	3/8/02	1 - 2	Perchlorate
STEP-17SS47	17SS47(0-0.5)-020308	3/8/02	0 - 0.5	Perchlorate
STEP-17SS47	17SS47(1-2)-020308	3/8/02	1 - 2	Perchlorate
STEP-18SS01	18SS01(0-0.5)-020309	3/9/02	0 - 0.5	Perchlorate
STEP-18SS01	18SS01(1-2)-020309	3/9/02	1 - 2	Perchlorate
STEP-18SS02	18SS02(0-0.5)-020309	3/9/02	0 - 0.5	Perchlorate
STEP-18SS02	18SS02(1-2)-020309	3/9/02	1 - 2	Perchlorate
STEP-18SS03	18SS03(0-0.5)-020309	3/9/02	0 - 0.5	Perchlorate
STEP-18SS03	18SS03(1-2)-020309	3/9/02	1 - 2	Perchlorate
STEP-18SS04	18SS04(0-0.5)-02	3/9/02	0 - 0.5	Perchlorate
STEP-18SS04	18SS04(0-0.5)-02_QC	3/9/02	0 - 0.5	Perchlorate
STEP-18SS04	18SS04(1-2)-020309	3/9/02	1 - 2	Perchlorate
STEP-18SS05	18SS05(0-0.5)-020309	3/9/02	0 - 0.5	Perchlorate
STEP-18SS05	18SS05(1-2)-020309	3/9/02	1 - 2	Perchlorate
STEP-18SS06	18SS06(0-0.5)-020309	3/9/02	0 - 0.5	Perchlorate
STEP-18SS06	18SS06(1-2)-020309	3/9/02	1 - 2	Perchlorate
Samples Not Included [f]				
12SB02	12SB02(1.0-2.0)	6/1/93	1 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
12SB05	12SB05(0-0.5)	5/31/00	0 - 0.5	Perchlorate
12SB05	12SB05(0-0.5)QC	5/31/00	0 - 0.5	Perchlorate
12SB07	12SB07(0-0.5)	5/31/00	0 - 0.5	Perchlorate
12WW03	12WW03(0-2)	4/19/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
12WW03	12WW03(0-2)QC	4/19/93	0 - 2	General Chemistry, Metals, SVOC, VOC
12WW04	12WW04(0-2)	4/18/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
12WW06	12WW06(0-2)	4/18/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
16SB02	16SB02(0-2)	4/17/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
16SB04	16SB04(0-4)	4/16/93	0 - 4	Explosives, General Chemistry, Metals[c], SVOC, VOC
16SB04	16SB04A(0-1)	4/17/93	0 - 1	Explosives, General Chemistry, Metals[c], SVOC, VOC
16SB05	16SB05(0-2)	4/16/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
16SB05	16SB05(0-2)QC	4/16/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
16SB06	16SB06(0-2)	4/15/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
16SB12	16SB12(0-0.5)	6/1/00	0 - 0.5	Perchlorate
16SB12	16SB12(1-2)	6/1/00	1 - 2	Perchlorate
16SB13	16SB13(0-0.5)	5/31/00	0 - 0.5	Perchlorate
16SB14	16SB14(0-0.5)	5/31/00	0 - 0.5	Perchlorate
16SD06	16SD06(000.0)	2/20/95	0 - 0	Explosives[d], Metals[e], VOC
16SD07	16SD07 (000.0)	2/21/95	0 - 0	Explosives[d], Metals[e], VOC
16SD31	16SD31	10/29/97	0 - 0	Dioxin/Furans, Explosives, Metals, Pest/PCB, VOC
16WW01	16WW01(0-2)	5/4/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
16WW01	16WW01(0-2)QC	5/4/93	0 - 2	General Chemistry, Metals[c], SVOC, VOC
16WW02	16WW02(0-2)	5/12/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
16WW02	16WW02(0-2)QC	5/12/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
16WW03	16WW03(0-2)	5/4/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
16WW04	16WW04(0-2)	5/12/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
16WW04	16WW04(0-2)QC	5/12/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
16WW05	16WW05(0-2)	5/4/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
16WW06	16WW06(0-2)	5/5/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
16WW07	16WW07(0-2)	5/11/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
16WW08	16WW08(0-1)	5/14/93	0 - 1	Explosives, General Chemistry, Metals[c], SVOC, VOC

Table 6-4
Sample Summary for Total Soil
Waste Sub-Area

Location	Sample No [a]	Date	Depth (ft bgs)	Analyses
16WW09	16WW09A(0-2)	5/5/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
16WW10	16WW10(0-2)	5/14/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
16WW10	16WW10(0-2)QC	5/14/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
16WW11	16WW11(0-2)	5/13/93	0 - 2	Explosives, General Chemistry, Metals[c], SVOC, VOC
18SS04	18SS04 (000.0)	3/17/95	0 - 0	Metals[c], VOC
LH-S116-01	LH-S116-01_1	7/7/93	0 - 2	Explosives, Metals, SVOC, VOC
LH-S116-02	LH-S116-02_1	7/7/93	0 - 2	Explosives, Metals, SVOC, VOC

Notes:

General Chemistry parameters include: chloride, nitrate, nitrite, sulfate, pH, and percent solids. Samples may not have been analyzed for all parameters.

[a] Field duplicates are indicated by the addition of "QC" to the sample number.

[b] Total soil is defined as samples 0 to 3 feet bgs. Deeper samples were also considered surface soil if at least 50% of their sampling depth interval was less than 3 ft bgs (e.g., 2-4 ft bgs).

[c] Metals analysis for antimony, arsenic, barium, cadmium, chromium, lead, mercury, nickel, selenium, silver, and thallium only.

[d] Explosives data from ITS laboratory were of questionable quality, and were not used.

[e] Metals analysis for antimony, arsenic, barium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, and zinc only.

[f] Samples not included in the ecological risk assessment because they are no longer available for ecological exposure due to prior remediation activities at the site.

ft bgs feet below ground surface
PAH Polynuclear aromatic hydrocarbons
PCB Polychlorinated biphenyls
Pest Pesticides
SVOC Semivolatile organic compounds
TPH Total petroleum hydrocarbons
VOC Volatile organic compounds

Table 6-5
Sample Summary for Surface Water
Harrison Bayou

Location	Sample Number [a]	Date	Analyses
16SW01	16SW01	5/4/93	Explosives, General Chemistry, Metals, SVOC, VOC
16SW01	16SW01(WATER)	2/21/95	Explosives, Metals, VOC
16SW03	16SW03	4/14/93	Explosives, General Chemistry, Metals, SVOC, VOC
16SW03	16SW03(WATER)	2/20/95	Explosives, Metals, VOC
16SW04	16SW04	4/14/93	Explosives, General Chemistry, Metals, SVOC, VOC
16SW04	16SW04(WATER)	2/21/95	Explosives, Metals, VOC
16SW05	16SW05	5/13/93	Explosives, General Chemistry, Metals, SVOC, VOC
16SW08	16SW08(WATER)	2/21/95	Explosives, Metals, VOC
16SW10	16SW10(WATER)	2/21/95	Explosives, Metals, VOC
16SW12	16SW12(WATER)	2/21/95	Explosives, Metals, VOC
16SW13	16SW13(WATER)	2/21/95	Explosives, Metals, VOC
16SW14	16SW14(WATER)	2/21/95	Explosives, Metals, VOC
16SW14	16SW14(WATER)QC	2/21/95	Explosives, Metals, VOC
16SW15	16SW15(WATER)	3/16/95	Explosives, Metals, VOC
16SW16	16SW16(WATER)	3/16/95	Explosives, Metals, VOC
16SW35	16SW35	10/29/97	Dioxins/Furans, Explosives, General Chemistry, Metals, Pest/PCB, VOC
17SW13	17SW13	9/17/98	Explosives, General Chemistry, Metals, VOC
17SW14	17SW14	9/17/98	Dioxins/Furans, Explosives, General Chemistry, Metals, Pest/PCB, SVOC, VOC
18SD20	18SD20(WATER)	6/15/95	Explosives
18SD21	18SD21(WATER)	6/15/95	Explosives
18SD22	18SD22(WATER)	6/15/95	Explosives
18SW01	18SW01	6/13/93	Explosives, General Chemistry, Metals, SVOC, VOC
18SW02	18SW02	5/11/93	Explosives, General Chemistry, Metals, SVOC, VOC
18SW12	18SW12(WATER)	2/18/95	Metals, VOC
18SW13	18SW13(WATER)	2/18/95	Metals, VOC
18SW13	18SW13(WATER)QC	2/18/95	Metals, VOC
18SW14	18SW14(WATER)	2/21/95	Metals, VOC
18SW15	18SW15(WATER)	2/21/95	Metals, VOC
18SW20	C-18SW20(WATER)-9502	2/22/95	Metals, VOC
18SW20	C-18SW20(WATER)-9506	6/19/95	Explosives
18SW21	C-18SW21(WATER)-9502	2/22/95	Metals, VOC
18SW21	C-18SW21(WATER)-9506	6/19/95	Explosives
18SW22	C-18SW22(WATER)-9503	3/16/95	Metals, VOC
18SW22	C-18SW22(WATER)-9506	6/19/95	Explosives
18SW23	18SW23(WATER)	3/16/95	Metals, VOC
18SW24	18SW24(WATER)	3/15/95	Metals, VOC
18SW25	18SW25(WATER)	2/20/95	Metals, VOC
18SW26	18SW26(WATER)	2/20/95	Metals, VOC
18SW27	18SW27	10/7/98	Dioxins/Furans, Explosives, General Chemistry, Metals, Pest/PCB, SVOC, VOC
18SW27	18SW27QC	10/7/98	Dioxins/Furans, Explosives, General Chemistry, Metals, Pest/PCB, SVOC, VOC
18SW28	18SW28	11/12/98	Dioxins/Furans, Explosives, General Chemistry, Metals, Pest/PCB, SVOC, VOC
27SW02	LH27-SW02	3/30/93	Explosives, General Chemistry, Metals, SVOC, VOC
27SW03	LH27-SW03	3/30/93	Explosives, General Chemistry, Metals, SVOC, VOC
27SW04	LH27-SW04	3/30/93	Explosives, General Chemistry, Metals, SVOC, VOC
CL-HB-1	CL-HB-1-000601	6/1/00	Perchlorate
CL-HB-1	CL-HB-1QC	6/1/00	Perchlorate
CL-HB-1	CL-HB-1-010201	2/1/01	Perchlorate
CL-HB-1	CL-HB-1-010719	7/19/01	Perchlorate
CL-HB-1	CL-HB-1-020619	6/19/02	Perchlorate
CL-HB-1	CL-HB-1-020925	9/25/02	Perchlorate
CL-HB-1	CL-HB-1-021203	12/3/02	Perchlorate
CL-HB-1	CL-HB-1-030604	6/4/03	Perchlorate
CL-HB-2	CL-HB-2-000601	6/1/00	Perchlorate
CL-HB-2	CL-HB-2-010201	2/1/01	Perchlorate
CL-HB-2	CL-HB-2-010719	7/19/01	Perchlorate
CL-HB-2	CL-HB-2-020619	6/19/02	Perchlorate
CL-HB-2	CL-HB-2-020925	9/25/02	Perchlorate
CL-HB-2	CL-HB-2-021203	12/3/02	Perchlorate

Table 6-5
Sample Summary for Surface Water
Harrison Bayou

Location	Sample Number [a]	Date	Analyses
CL-HB-2	CL-HB-2-030604	6/4/03	Perchlorate
CL-HB-2	CL-HB-2-030826	8/26/03	Perchlorate
HB-1	HB-1-000427	4/27/00	Perchlorate
HB-2	HB-2-000427	4/27/00	Perchlorate
HBSW01	P3HBSW01	9/17/98	Dioxins/Furans, Explosives, General Chemistry, Metals, Pest/PCB, SVOC, VOC
HBSW01	P3HBSW01QC	9/17/98	Dioxins/Furans, Explosives, General Chemistry, Metals, Pest/PCB, SVOC, VOC
HBSW01	P3HBSW01-981204	12/4/98	Dioxins/Furans, Explosives, General Chemistry, Metals, Pest/PCB, SVOC, VOC
HBW-1	HBW-1 S5 0193-2	8/31/95	VOC
HBW-1	HBW-1-960612	6/12/96	VOC
HBW-1	HBW-1-960807	8/7/96	Explosives, VOC
HBW-1	HBW-1AR	8/10/96	VOC
HBW-1	HBW-1-970205	2/5/97	VOC
HBW-1	HBW-1-970522	5/22/97	General Chemistry, VOC
HBW-1	HBW-1-971210	12/10/97	VOC
HBW-1	HBW-1QC-971210	12/10/97	VOC
HBW-1	HBW-1-980209	2/9/98	VOC
HBW-1	HBW-1QC-980209	2/9/98	VOC
HBW-1	HBW-1-980601	6/1/98	VOC
HBW-1	HBW-1QC-980601	6/1/98	VOC
HBW-1	HBW-1-981027	10/27/98	VOC
HBW-1	HBW-1-990324	3/24/99	VOC
HBW-1	HBW-1-990708	7/8/99	Perchlorate, VOC
HBW-1	HBW-1-990923	9/23/99	Perchlorate, VOC
HBW-1	HBW-1QA-DIL	9/23/99	VOC
HBW-1	HBW-1QC-990923	9/23/99	Perchlorate, VOC
HBW-1	HBW-1-000203	2/3/00	Perchlorate, VOC
HBW-1	HBW-1-000421	4/21/00	Perchlorate, VOC
HBW-1	HBW-1-000810	8/10/00	VOC
HBW-1	HBW-1QC-000810	8/10/00	VOC
HBW-1	HBW-1-010201	2/1/01	Perchlorate, VOC
HBW-1	HBW-1QC-010201	2/1/01	Perchlorate, VOC
HBW-1	HBW-1-010718	7/18/01	Perchlorate, VOC
HBW-1	HBW-1QC-010718	7/18/01	Perchlorate, VOC
HBW-1	HBW-1-011030	10/30/01	Perchlorate, VOC
HBW-1	HBW-1-020115	1/15/02	Perchlorate, VOC
HBW-1	HBW-1QC-020115	1/15/02	Perchlorate, VOC
HBW-1	HBW-1-020616	6/16/02	Perchlorate, VOC
HBW-1	HBW-1QC-020619	6/19/02	Perchlorate, VOC
HBW-1	HBW-1-020925	9/25/02	Perchlorate, VOC
HBW-1	HBW-1QC-020925	9/25/02	Perchlorate, VOC
HBW-1	HBW-1-021203	12/3/02	Perchlorate, VOC
HBW-1	HBW-1QC-021203	12/3/02	Perchlorate, VOC
HBW-1	HBW-1-030604	6/4/03	Perchlorate, VOC
HBW-1	HBW-1QC-030604	6/4/03	Perchlorate, VOC
HBW-1	HBW-1-030826	8/26/03	Perchlorate, VOC
HBW-1	HBW-1QC-030826	8/26/03	Perchlorate, VOC
HBW-10	HBW-10-990708	7/8/99	Perchlorate
HBW-10	HBW-10-990923	9/23/99	Perchlorate
HBW-10	HBW-10-000203	2/3/00	Perchlorate, VOC
HBW-10	HBW-10-000420	4/20/00	Perchlorate
HBW-10	HBW-10-000810	8/10/00	Perchlorate
HBW-10	HBW-10-010201	2/1/01	Perchlorate
HBW-10	HBW-10-010718	7/18/01	Perchlorate
HBW-10	HBW-10-020619	6/19/02	Perchlorate
HBW-10	HBW-10-020925	9/25/02	Perchlorate
HBW-10	HBW-10-021203	12/3/02	Perchlorate
HBW-10	HBW-10-030604	6/4/03	Perchlorate
HBW-2	HBW-2 S5 0193-4	8/31/95	VOC

Table 6-5
Sample Summary for Surface Water
Harrison Bayou

Location	Sample Number [a]	Date	Analyses
HBW-3	HBW-3 S5 0193-6	8/31/95	VOC
HBW-4	HBW-4 S5 0193-8	8/31/95	VOC
HBW-4	HBW-4-990708	7/8/99	Perchlorate
HBW-5	HBW-5-950831	8/31/95	VOC
HBW-5	HBW-5-960612	6/12/96	VOC
HBW-5	HBW-5-960807	8/7/96	Explosives, VOC
HBW-5	HBW-5AR	8/10/96	VOC
HBW-5	HBW-5-970205	2/5/97	VOC
HBW-5	HBW-5-970522	5/22/97	General Chemistry, VOC
HBW-5	HBW-5-971210	12/10/97	VOC
HBW-5	HBW-5-980209	2/9/98	VOC
HBW-5	HBW-5-980601	6/1/98	VOC
HBW-5	HBW-5-981027	10/27/98	VOC
HBW-5	HBW-5-990326	3/26/99	VOC
HBW-5	HBW-5-990708	7/8/99	Perchlorate, VOC
HBW-5	HBW-5-990924	9/24/99	Perchlorate, VOC
HBW-5	HBW-5-000203	2/3/00	Perchlorate, VOC
HBW-5	HBW-5-000421	4/21/00	Perchlorate, VOC
HBW-5	HBW-5-000810	8/10/00	VOC
HBW-5	HBW-5-010201	2/1/01	Perchlorate, VOC
HBW-5	HBW-5-010718	7/18/01	Perchlorate, VOC
HBW-5	HBW-5-011030	10/30/01	Perchlorate, VOC
HBW-5	HBW-5-020115	1/15/02	Perchlorate, VOC
HBW-5	HBW-5-020619	6/19/02	Perchlorate, VOC
HBW-5	HBW-5-020925	9/25/02	Perchlorate, VOC
HBW-5	HBW-5-021203	12/3/02	Perchlorate, VOC
HBW-5	HBW-5-030604	6/4/03	Perchlorate, VOC
HBW-5.5	HBW-5.5-990708	7/8/99	Perchlorate, VOC
HBW-5.5	HBW-5.5-000203	2/3/00	Perchlorate, VOC
HBW-5.5	HBW-5.5-000421	4/21/00	Perchlorate, VOC
HBW-6	HBW-6-950911	9/11/95	VOC
HBW-6	HBW-6-970205	2/5/97	VOC
HBW-6	HBW-6-970522	5/22/97	General Chemistry, VOC
HBW-6	HBW-6-971210	12/10/97	VOC
HBW-6	HBW-6-980209	2/9/98	VOC
HBW-6	HBW-6-980601	6/1/98	VOC
HBW-6	HBW-6-981027	10/27/98	VOC
HBW-6	HBW-6-990326	3/26/99	VOC
HBW-6	HBW-6-990708	7/8/99	Perchlorate, VOC
HBW-6	HBW-6-990924	9/24/99	Perchlorate, VOC
HBW-6	HBW-6-000203	2/3/00	Perchlorate, VOC
HBW-6	HBW-6-000420	4/20/00	Perchlorate, VOC
HBW-6	HBW-6QC	4/20/00	Perchlorate, VOC
HBW-6	HBW-6-000810	8/10/00	VOC
HBW-6	HBW-6-010201	2/1/01	Perchlorate, VOC
HBW-6	HBW-6-010718	7/18/01	Perchlorate, VOC
HBW-6	HBW-6-011030	10/30/01	Perchlorate, VOC
HBW-6	HBW-6-020115	1/15/02	Perchlorate, VOC
HBW-6	HBW-6-020619	6/19/02	Perchlorate, VOC
HBW-6	HBW-6-020925	9/25/02	Perchlorate, VOC
HBW-6	HBW-6-021203	12/3/02	Perchlorate, VOC
HBW-6	HBW-6-030604	6/4/03	Perchlorate, VOC
HBW-6.5	HBW-6.5-970205	2/5/97	VOC
HBW-6.5	HBW-6.5-970522	5/22/97	General Chemistry, VOC
HBW-6.5	HBW-6.5-971210	12/10/97	VOC
HBW-6.5	HBW-6.5-980209	2/9/98	VOC
HBW-6.5	HBW-6.5-980601	6/1/98	VOC
HBW-6.5	HBW-6.5-981027	10/27/98	VOC

Table 6-5
Sample Summary for Surface Water
Harrison Bayou

Location	Sample Number [a]	Date	Analyses
HBW-6.5	HBW-6.5-990326	3/26/99	VOC
HBW-6.5	HBW-6.5-990708	7/8/99	Perchlorate, VOC
HBW-6.5	HBW-6.5-990924	9/24/99	Perchlorate, VOC
HBW-6.5	HBW-6.5-000203	2/3/00	Perchlorate, VOC
HBW-6.5	HBW-6.5-000421	4/21/00	Perchlorate, VOC
HBW-6.5	HBW-6.5-000810	8/10/00	Perchlorate, VOC
HBW-6.5	HBW-6.5-010201	2/1/01	Perchlorate, VOC
HBW-6.5	HBW-6-5	7/18/01	Perchlorate, VOC
HBW-6.5	HBW-6.5-011030	10/30/01	Perchlorate, VOC
HBW-6.5	HBW-6.5-020115	1/15/02	Perchlorate, VOC
HBW-6.5	HBW-6.5-020619	6/19/02	Perchlorate, VOC
HBW-6.5	HBW-6.5-020925	9/25/02	Perchlorate, VOC
HBW-6.5	HBW-6.5-021203	12/3/02	Perchlorate, VOC
HBW-6.5	HBW-6.5-030604	6/4/03	Perchlorate, VOC
HBW-6A	HBW-6A-960807	8/7/96	Explosives, VOC
HBW-6A	HBW-6AAR	8/10/96	VOC
HBW-7	HBW-7-950911	9/11/95	VOC
HBW-7	HBW-7-981027	10/27/98	VOC
HBW-7	HBW-7-990326	3/26/99	VOC
HBW-7	HBW-7-990708	7/8/99	Perchlorate, VOC
HBW-7	HBW-7-990924	9/24/99	Perchlorate, VOC
HBW-7	HBW-7-000203	2/3/00	Perchlorate, VOC
HBW-7	HBW-7-000420	4/20/00	Perchlorate, VOC
HBW-7	HBW-7-010201	2/1/01	Perchlorate, VOC
HBW-7	HBW-7-010718	7/18/01	Perchlorate, VOC
HBW-7	HBW-7-011030	10/30/01	Perchlorate, VOC
HBW-7	HBW-7-020115	1/15/02	Perchlorate, VOC
HBW-7	HBW-7-020619	6/19/02	Perchlorate, VOC
HBW-7	HBW-7-020925	9/25/02	Perchlorate, VOC
HBW-7	HBW-7-021203	12/3/02	Perchlorate, VOC
HBW-7	HBW-7-030604	6/4/03	Perchlorate, VOC
HBW-7	HBW-7-030826	8/26/03	Perchlorate, VOC
HBW-8	HBW-8-950911	9/11/95	VOC
HBW-8	HBW-8-990924	9/24/99	Perchlorate, VOC
HBW-8	HBW-8-000203	2/3/00	Perchlorate, VOC
HBW-8	HBW-8-000421	4/21/00	Perchlorate, VOC
HBW-8	HBW-8-010201	2/1/01	Perchlorate, VOC
HBW-8	HBW-8-010718	7/18/01	Perchlorate, VOC
HBW-8	HBW-8-011030	10/30/01	Perchlorate, VOC
HBW-8	HBW-8-020115	1/15/02	Perchlorate, VOC
HBW-8	HBW-8-020619	6/19/02	Perchlorate, VOC
HBW-8	HBW-8-020925	9/25/02	Perchlorate, VOC
HBW-8	HBW-8-021203	12/3/02	Perchlorate, VOC
HBW-8	HBW-8-030604	6/4/03	Perchlorate, VOC
HBW-8	HBW-8-030826	8/26/03	Perchlorate, VOC
HBW-9	HBW-9-950911	9/11/95	VOC
HBW-9	HBW-9-990708	7/8/99	Perchlorate, VOC
HBW-9	HBW-9-000203	2/3/00	Perchlorate, VOC
HBW-9	HBW-9-000810	8/10/00	Perchlorate, VOC
HBW-9	HBW-9-010201	2/1/01	Perchlorate, VOC
HBW-9	HBW-9-010718	7/18/01	Perchlorate, VOC
HBW-9	HBW-9-011030	10/30/01	Perchlorate, VOC
HBW-9	HBW-9-020115	1/15/02	Perchlorate, VOC
HBW-9	HBW-9-020619	6/19/02	Perchlorate, VOC
HBW-9	HBW-9-020925	9/25/02	Perchlorate, VOC
HBW-9	HBW-9-021203	12/3/02	Perchlorate, VOC
HBW-9	HBW-9-030604	6/4/03	Perchlorate, VOC
HBW-9	HBW-9-030826	8/26/03	Perchlorate, VOC

Table 6-5
Sample Summary for Surface Water
Harrison Bayou

Location	Sample Number [a]	Date	Analyses
HBW-B	HBW-B-981027	10/27/98	VOC
HBW-D	HBW-D-981027	10/27/98	VOC
HBW-F	HBW-F-981027	10/27/98	VOC
HBW-H	HBW-H-981027	10/27/98	VOC
HBW-M	HBW-M-981027	10/27/98	VOC
XXSW01	LHXX-SW01	3/30/93	Explosives, General Chemistry, Metals, SVOC, VOC
XXSW15	C930331-XXSW15-QC00	3/31/93	Explosives, General Chemistry, Metals, SVOC, VOC
XXSW15	LHXX-SW15	3/31/93	Explosives, General Chemistry, Metals, SVOC, VOC

Notes:

[a] Field duplicate samples are identified by the addtion of QC to the sample number.

PCB Polychlorinated biphenyls
Pest Pesticides
SVOC Semivolatile organic compounds
VOC Volatile organic compounds

Table 6-6
Sample Summary for Sediment
Harrison Bayou

Location	Sample Number [a]	Date	Analyses
16SD01	16SD01(0-0.5)	05/02/93	Explosives, General Chemistry, Metals, SVOC, VOC
16SD01	16SD01 (000.0)	02/21/95	Explosives, Metals, VOC
16SD03	16SD03(0-1)	04/14/93	Explosives, General Chemistry, Metals, SVOC, VOC
16SD03	16SD03(000.0)	02/20/95	Explosives, Metals, VOC
16SD04	16SD04(0-1)	04/14/93	Explosives, General Chemistry, Metals, SVOC, VOC
16SD04	16SD04 (000.0)	02/21/95	Explosives, Metals, VOC
16SD05	16SD05(0-0.5)	05/02/93	Explosives, General Chemistry, Metals, SVOC, VOC
16SD05	16SD05(0-0.5)QC	05/02/93	Explosives, General Chemistry, Metals, SVOC, VOC
16SD08	16SD08 (000.0)	02/21/95	Explosives, Metals, VOC
16SD10	16SD10 (000.0)	02/21/95	Explosives, Metals, VOC
16SD12	16SD12 (000.0)	02/21/95	Explosives, Metals, VOC
16SD13	16SD13 (000.0)	02/21/95	Explosives, Metals, VOC
16SD14	16SD14 (000.0)	02/21/95	Explosives, Metals, VOC
16SD14	16SD14 QC (000.	02/21/95	Explosives, Metals, VOC
16SD15	16SD15(000.0)	03/16/95	Explosives, Metals, VOC
16SD16	16SD16 (000.0)	03/16/95	Explosives, Metals, VOC
16SD35	16SD35	10/29/97	Dioxins/Furans, Explosives, Metals, Pest/PCB, VOC
17SD03	17SD03	04/21/93	Explosives, General Chemistry, Metals, SVOC, VOC
17SD13	17SD13	09/17/98	Explosives, Metals, VOC
17SD14	17SD14	09/17/98	Dioxins/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
18SD01	18SD01(0-0.5)	05/02/93	Explosives, General Chemistry, Metals, SVOC, VOC
18SD01	18SD01(0-0.5)QC	05/02/93	Explosives, General Chemistry, Metals, SVOC, VOC
18SD02	18SD02(0-0.5)	05/02/93	Explosives, General Chemistry, Metals, SVOC, VOC
18SD12	18SD12(000.0)	02/18/95	Metals, VOC
18SD13	18SD13(000.0)	02/18/95	Metals, VOC
18SD13	18SD13(000.0)QC	02/18/95	Metals, VOC
18SD14	18SD14 (000.0)	02/21/95	Metals, VOC
18SD15	18SD15 (000.0)	02/21/95	Metals, VOC
18SD20	18SD20 (000.0)	02/22/95	Metals, VOC
18SD20	18SD20(000.0)	06/15/95	Explosives
18SD21	C-18SD21(000.0)-9502	02/22/95	Metals, VOC
18SD21	C-18SD21(000.0)-9506	06/15/95	Explosives
18SD22	18SD22 (000.0)	03/16/95	Metals, VOC
18SD22	18SD22(000.0)	06/15/95	Explosives
18SD23	18SD23 (000.0)	03/16/95	Metals, VOC
18SD24	18SD24 (000.0)	03/15/95	Metals, VOC
18SD25	18SD25(000.0)	02/20/95	Metals, VOC
18SD26	18SD26(000.0)	02/20/95	Metals, VOC
18SD27	18SD27	10/07/98	Dioxins/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
18SD27	18SD27QC	10/07/98	Dioxins/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
18SD28	18SD28	11/12/98	Dioxins/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
18SW21	18SW21 (000.0)	02/22/95	Metals, VOC
27SD02	LH27-SD02	03/30/93	Explosives, General Chemistry, Metals, SVOC, VOC
27SD02	C940823-27SD02-N00	08/23/94	Metals
27SD03	LH27-SD03	03/30/93	Explosives, General Chemistry, Metals, SVOC, VOC
27SD04	LH27-SD04	03/30/93	Explosives, General Chemistry, Metals, SVOC, VOC
FWS-149	CLNWR149	09/09/03	Dioxins/Furans, Metals, Pesticides, SVOC
FWS-153	CLNWR153	09/09/03	Metals, Pesticides, SVOC
FWS-154	CLNWR154	09/09/03	Metals, Pesticides, SVOC
FWS-162	CLNWR162	09/09/03	Metals, Pesticides, SVOC
FWS-163	CLNWR163	09/09/03	Metals, Pesticides, SVOC
FWS-170	CLNWR170	09/09/03	Metals, Pesticides, SVOC
FWS-171	CLNWR171	09/09/03	Metals, Pesticides, SVOC
HBS-1	HBS-1 S5 0193-10	08/31/95	General Chemistry, VOC
HBS-1	HBS-1-960612	06/12/96	VOC
HBS-1	HBS-1-960807	08/07/96	VOC

Table 6-6
Sample Summary for Sediment
Harrison Bayou

Location	Sample Number [a]	Date	Analyses
HBS-1	HBS-1-QC	08/07/96	VOC
HBS-2	HBS-2 S5 0193-12	08/31/95	General Chemistry, VOC
HBS-3	HBS-3 S5 0193-14	08/31/95	General Chemistry, VOC
HBS-4	HBS-4 S5 0193-16	08/31/95	General Chemistry, VOC
HBS-5	HBS-5-950911	09/11/95	VOC
HBS-5	HBS-5-960612	06/12/96	VOC
HBS-5	HBS-5-960807	08/07/96	VOC
HBS-6	HBS-6-950911	09/11/95	VOC
HBS-6A	HBS-6A-960807	08/07/96	VOC
HBS-7	HBS-7-950911	09/11/95	VOC
HBS-8	HBS-8-950911	09/11/95	VOC
HBS-9	HBS-9-950911	09/11/95	VOC
HBSD01	P3HBSD01	09/17/98	Dioxins/Furans, Explosives, General Chemistry, Metals, Pest/PCB, SVOC, VOC
HBW-1	HBW-1-SED	08/10/00	Perchlorate
HBW-5	HBW-5-SED	08/10/00	Perchlorate
HBW-6	HBW-6-SED	08/10/00	Perchlorate
XXSD01	LHXX-SD01	03/30/93	Explosives, General Chemistry, Metals, SVOC, VOC
XXSD15	LHXX-SD15	03/31/93	Explosives, General Chemistry, Metals, SVOC, VOC
XXSD15	LHXX-SD15-QC	03/31/93	Explosives, General Chemistry, Metals, SVOC, VOC
XXSD15	C940823-XXSD15-N00	08/23/94	Explosives, General Chemistry, Metals, SVOC, VOC

Notes:

[a] Field duplicate samples are identified by the addtion of QC to the sample number.

PCB Polychlorinated biphenyls
Pest Pesticides
SVOC Semivolatile organic compounds
VOC Volatile organic compounds

Table 6-7
Sample Summary for Surface Water
Goose Prairie Creek

Location	Sample Number [a]	Date	Analyses
29SW12	29SW12	05/12/93	Explosives, General Chemistry, Metals, SVOC, VOC
29SW12	29SW12-QC	05/12/93	General Chemistry, Metals, SVOC, VOC
29SW13	29SW13	05/03/93	Explosives, General Chemistry, Metals, SVOC, VOC
29SW13	29SW13-QC	05/03/93	General Chemistry, Metals, SVOC, VOC
29SW14	29SW14	05/25/93	Explosives, General Chemistry, Metals, SVOC, VOC
29SW15	29SW15	05/03/93	Explosives, General Chemistry, Metals, SVOC, VOC
29SW16	29SW16	05/13/93	Explosives, General Chemistry, Metals, SVOC, VOC
29SW17	29SW17	05/04/93	Explosives, General Chemistry, Metals, SVOC, VOC
29SW17	29SW17-QC	05/04/93	Explosives, General Chemistry, Metals, SVOC, VOC
29SW22	29SW22	10/07/98	Explosives, General Chemistry, Metals, VOC
29SW27	29SW27	10/08/98	Dioxins/Furans, Explosives, General Chemistry, Metals, Pest/PCB, SVOC, VOC
29SW29	29SW29	10/06/98	Explosives, General Chemistry, Metals, VOC
29SW30	29SW30	10/07/98	Dioxins/Furans, Explosives, General Chemistry, Metals, Pest/PCB, SVOC, VOC
29SW31	29SW31	10/07/98	Explosives, General Chemistry, Metals, VOC
32SW01	32SW01-930525	05/25/93	Explosives, General Chemistry, Metals, SVOC, VOC
32SW02	32SW02-930506	05/06/93	Explosives, General Chemistry, Metals, SVOC, VOC
32SW03	32SW03-930512	05/12/93	Explosives, General Chemistry, Metals, SVOC, VOC
32SW08	32SW08(WATER)	04/12/95	Explosives, Metals
32SW09	32SW09(WATER)	04/12/95	Explosives, Metals
32SW10	32SW10(WATER)	02/20/95	Explosives, Metals
32SW14	32SW14(WATER)	02/19/95	Explosives, Metals
32SW15	32SW15(WATER)	02/19/95	Explosives, Metals
32SW16	32SW16(WATER)	02/19/95	Explosives, Metals
32SW19	32SW19-981008	10/08/98	Dioxins/Furans, Explosives, General Chemistry, Metals, Pest/PCB, SVOC, VOC
35ASW01	35ASW01-981109	11/09/98	Explosives, General Chemistry, Metals, Pest/PCB, SVOC, VOC
35ASW01	35ASW01-981203	12/03/98	Pest/PCB
35ASW02	35ASW02-981109	11/09/98	Explosives, General Chemistry, Metals, SVOC, VOC
35ASW02	35ASW02-981203	12/03/98	Pest/PCB
46SW03	46SW03-981110	11/10/98	Explosives, General Chemistry, Metals, SVOC, VOC
46SW03	46SW03-981203	12/03/98	Pest/PCB
46SW04	46SW04-981110	11/10/98	Explosives, General Chemistry, Metals, SVOC, VOC
46SW04	46SW04-981207	12/07/98	Pest/PCB
46SW07	46SW07-981110	11/10/98	Explosives, General Chemistry, Metals, SVOC, VOC
46SW07	46SW07-981203	12/03/98	Pest/PCB
46SW08	46SW08-981110	11/10/98	Explosives, General Chemistry, Metals, SVOC, VOC
46SW08	46SW08-981203	12/03/98	Pest/PCB
50SW03	50SW03-981112	11/12/98	Explosives, General Chemistry, Metals, SVOC, VOC
50SW04	50SW04-981111	11/11/98	Explosives, General Chemistry, Metals, SVOC, VOC
50SW05	50SW05-981111	11/11/98	Explosives, General Chemistry, Metals, SVOC, VOC
50SW06	50SW06-981110	11/10/98	Explosives, General Chemistry, Metals, Pest/PCB, SVOC, VOC
50SW06	C-50SW06QC-981110	11/10/98	Explosives, General Chemistry, Metals, Pest/PCB, SVOC, VOC
50SW06	50SW06-981111	11/11/98	Dioxins/Furans
50SW06	C-50SW06QC-981111	11/11/98	Dioxins/Furans
50SW07	50SW07-981111	11/11/98	Explosives, General Chemistry, Metals, SVOC, VOC
50SW08	50SW08-981111	11/11/98	Dioxins/Furans, Explosives, General Chemistry, Metals, Pest/PCB, SVOC, VOC
60SW01	60SW01-981110	11/10/98	Pesticides
60SW02	60SW02-981110	11/10/98	Pesticides
60SW02	60SW02QC	11/10/98	Pesticides
GPCSW01	GPCSW01-981118	11/18/98	Explosives, General Chemistry, Metals, SVOC, VOC
GPCSW01	GPCSW01-981202	12/02/98	Pest/PCB
GPCSW02	GPCSW02-981118	11/18/98	Explosives, General Chemistry, Metals, SVOC, VOC
GPCSW02	GPCSW02-981202	12/02/98	Pest/PCB
GPCSW03	GPCSW03-981117	11/17/98	Dioxins/Furans, Explosives, General Chemistry, Metals, Pest/PCB, SVOC, VOC
GPCSW04	GPCSW04-981116	11/16/98	Explosives, General Chemistry, Metals, SVOC, VOC
GPCSW04	GPCSW04-981202	12/02/98	Pest/PCB
GPCSW05	GPCSW05-981116	11/16/98	Explosives, General Chemistry, Metals, SVOC, VOC
GPCSW05	GPCSW05-981202	12/02/98	Pest/PCB
GPCSW06	GPCSW06-981116	11/16/98	Dioxins/Furans, Explosives, General Chemistry, Metals, Pest/PCB, SVOC, VOC
GPCSW06	GPCSW06QC	11/16/98	Dioxins/Furans, Explosives, General Chemistry, Metals, Pest/PCB, SVOC, VOC

Table 6-7
Sample Summary for Surface Water
Goose Prairie Creek

Location	Sample Number [a]	Date	Analyses
GPCSW07	GPCSW07-981116	11/16/98	Explosives, General Chemistry, Metals, SVOC, VOC
GPCSW07	GPCSW07-981203	12/03/98	Pest/PCB
GPCSW07	GPCSW07-981207	12/07/98	Pest/PCB
GPCSW08	GPCSW08-981111	11/11/98	Dioxins/Furans, Explosives, General Chemistry, Metals, Pest/PCB, SVOC, VOC
GPCSW10	GPCSW10-981111	11/11/98	Explosives, General Chemistry, Metals, SVOC, VOC
GPCSW10	GPCSW10-981203	12/03/98	Pest/PCB
GPW-1	GPW-1-960807	08/07/96	Explosives, SVOC, VOC
GPW-1	GPW-1-QC	08/07/96	Explosives, SVOC, VOC
GPW-1	GPW-1AR-960810	08/10/96	SVOC, VOC
GPW-1	GPW-1-970206	02/06/97	VOC
GPW-1	GPW-1-970521	05/21/97	Explosives, VOC
GPW-1	GPW-1-970903	09/03/97	Explosives, VOC
GPW-1	GPW-1-971209	12/09/97	Explosives, VOC
GPW-1	GPW-1-980210	02/10/98	Explosives, VOC
GPW-1	GPW-1AR-980211	02/11/98	Explosives, VOC
GPW-1	GPW-1-980602	06/02/98	Explosives, VOC
GPW-1	GPW-1-990325	03/25/99	Explosives, VOC
GPW-1	GPW-1-990707	07/07/99	Explosives, Perchlorate, VOC
GPW-1	GPW-1-000204	02/04/00	Explosives, Perchlorate, VOC
GPW-1	GPW-1-000421	04/21/00	Explosives, Perchlorate, VOC
GPW-1	GPW-1-000808	08/08/00	Explosives, Perchlorate, VOC
GPW-1	GPW-1-001205	12/05/00	Explosives, Perchlorate, VOC
GPW-1	GPW-1-010418	04/18/01	Explosives, Perchlorate, VOC
GPW-1	GPW-1-010717	07/17/01	Explosives, Perchlorate, VOC
GPW-1	GPW-1-011030	10/30/01	Explosives, Perchlorate, VOC
GPW-1	GPW-1-020115	01/15/02	Explosives, Perchlorate, VOC
GPW-1	GPW-1-020618	06/18/02	Explosives, Perchlorate, VOC
GPW-1	GPW-1-020926	09/26/02	Explosives, Perchlorate, VOC
GPW-1	GPW-1-021204	12/04/02	Explosives, Perchlorate, VOC
GPW-1	GPW-1-030213	02/13/03	Explosives, Perchlorate, VOC
GPW-1	GPW-1-030619	06/19/03	Explosives, Perchlorate, VOC
GPW-1	GPW-1QC	06/19/03	Explosives, Perchlorate, VOC
GPW-10	GPW-10-970903	09/03/97	Explosives, VOC
GPW-10	GPW-10-971210	12/10/97	VOC
GPW-10	GPW-10-980210	02/10/98	Explosives, VOC
GPW-10	GPW-10-980602	06/02/98	Explosives, VOC
GPW-11	GPW-11-970904	09/04/97	Explosives, VOC
GPW-12	GPW-12-970904	09/04/97	Explosives, VOC
GPW-12	GPW-12-971209	12/09/97	Explosives, VOC
GPW-12	GPW-12-980210	02/10/98	Explosives, VOC
GPW-12	GPW-12AR	02/11/98	Explosives, VOC
GPW-12	GPW-12-990325	03/25/99	Explosives, VOC
GPW-12	GPW-12-990707	07/07/99	Explosives, Perchlorate, VOC
GPW-12	GPW-12-000204	02/04/00	Explosives, Perchlorate, VOC
GPW-12	GPW-12-000421	04/21/00	Explosives, Perchlorate, VOC
GPW-12	GPW-12-001205	12/05/00	Explosives, Perchlorate, VOC
GPW-12	GPW-12-010418	04/18/01	Explosives, Perchlorate, VOC
GPW-12	GPW-12-011030	10/30/01	Explosives, Perchlorate, VOC
GPW-12	GPW-12-020115	01/15/02	Explosives, Perchlorate, VOC
GPW-12	GPW-12-021204	12/04/02	Explosives, Perchlorate, VOC
GPW-12	GPW-12-030213	02/13/03	Explosives, Perchlorate, VOC
GPW-12	GPW-12-030619	06/19/03	Explosives, Perchlorate, VOC
GPW-13	GPW-13-971210	12/10/97	VOC
GPW-14	GPW-14-971210	12/10/97	VOC
GPW-2	GPW-2-960807	08/07/96	Explosives, SVOC, VOC
GPW-2	GPW-2AR-960810	08/10/96	SVOC, VOC
GPW-2	GPW-2AR-QC	08/10/96	SVOC, VOC
GPW-2	GPW-2-970206	02/06/97	VOC
GPW-2	GPW-2 QC-970521	05/21/97	Explosives, VOC

Table 6-7
Sample Summary for Surface Water
Goose Prairie Creek

Location	Sample Number [a]	Date	Analyses
GPW-2	GPW-2-970521	05/21/97	Explosives, VOC
GPW-2	GPW-2-970903	09/03/97	Explosives, VOC
GPW-2	GPW-2-971209	12/09/97	Explosives, VOC
GPW-2	GPW-2-QC	12/09/97	Explosives, VOC
GPW-2	GPW-2-980210	02/10/98	Explosives, VOC
GPW-2	GPW-2QC-980210	02/10/98	Explosives, VOC
GPW-2	GPW-2AR-980211	02/11/98	Explosives, VOC
GPW-2	GPW-2ARQC	02/11/98	Explosives, VOC
GPW-2	GPW-2-980602	06/02/98	Explosives, VOC
GPW-2	GPW-2QC-980602	06/02/98	Explosives, VOC
GPW-2	GPW-2-990325	03/25/99	Explosives, VOC
GPW-2	GPW-2-990707	07/07/99	Explosives, Perchlorate, VOC
GPW-2	GPW-2QC-990707	07/07/99	Explosives, Perchlorate, VOC
GPW-2	GPW-2-990923	09/23/99	Explosives, Perchlorate, VOC
GPW-2	GPW-2QC-990923	09/23/99	Explosives, Perchlorate, VOC
GPW-2	GPW-2 QC-000204	02/04/00	Explosives, Perchlorate, VOC
GPW-2	GPW-2-000204	02/04/00	Explosives, Perchlorate, VOC
GPW-2	GPW-2-000421	04/21/00	Explosives, Perchlorate, VOC
GPW-2	GPW-2-000808	08/08/00	Explosives, Perchlorate, VOC
GPW-2	GPW-2QC-000808	08/08/00	Explosives, Perchlorate, VOC
GPW-2	GPW-2-001205	12/05/00	Explosives, Perchlorate, VOC
GPW-2	GPW-2QC-001205	12/05/00	Explosives, Perchlorate, VOC
GPW-2	GPW-2-010418	04/18/01	Explosives, Perchlorate, VOC
GPW-2	GPW-2-010717	07/17/01	Explosives, Perchlorate, VOC
GPW-2	GPW-2QC-010717	07/17/01	Explosives, Perchlorate, VOC
GPW-2	GPW-2-011030	10/30/01	Explosives, Perchlorate, VOC
GPW-2	GPW-2QC-011030	10/30/01	Explosives, Perchlorate, VOC
GPW-2	GPW-2-020115	01/15/02	Explosives, Perchlorate, VOC
GPW-2	GPW-2QC-020115	01/15/02	Explosives, Perchlorate, VOC
GPW-2	GPW-2-020618	06/18/02	Explosives, Perchlorate, VOC
GPW-2	GPW-2QC-020618	06/18/02	Explosives, Perchlorate, VOC
GPW-2	GPW-2-020926	09/26/02	Explosives, Perchlorate, VOC
GPW-2	GPW-2QC-020926	09/26/02	Explosives, Perchlorate, VOC
GPW-2	GPW-2-021204	12/04/02	Explosives, Perchlorate, VOC
GPW-2	GPW-2QC-021204	12/04/02	Explosives, Perchlorate, VOC
GPW-2	GPW-2-030213	02/13/03	Explosives, Perchlorate, VOC
GPW-2	GPW-2-030619	06/19/03	Explosives, Perchlorate, VOC
GPW-2	GPW-2-030820	08/20/03	Explosives, Perchlorate, VOC
GPW-3	GPW-3-960807	08/07/96	Explosives, SVOC, VOC
GPW-3	GPW-3AR-960810	08/10/96	SVOC, VOC
GPW-3	GPW-3 QC	02/06/97	VOC
GPW-3	GPW-3-970206	02/06/97	VOC
GPW-3	GPW-3-970521	05/21/97	Explosives, VOC
GPW-3	GPW-3-970903	09/03/97	Explosives, VOC
GPW-3	GPW-3-971209	12/09/97	Explosives, VOC
GPW-3	GPW-3-980210	02/10/98	Explosives, VOC
GPW-3	GPW-3AR-980211	02/11/98	Explosives, VOC
GPW-3	GPW-3-980602	06/02/98	Explosives, VOC
GPW-3	GPW-3-990325	03/25/99	Explosives, VOC
GPW-3	GPW-3-990707	07/07/99	Explosives, Perchlorate, VOC
GPW-3	GPW-3-990924	09/24/99	Explosives, Perchlorate, VOC
GPW-3	GPW-3-000204	02/04/00	Explosives, Perchlorate, VOC
GPW-3	GPW-3-000421	04/21/00	Explosives, Perchlorate, VOC
GPW-3	GPW-3-000808	08/08/00	Explosives, Perchlorate, VOC
GPW-3	GPW-3-001205	12/05/00	Explosives, Perchlorate, VOC
GPW-3	GPW-3-010418	04/18/01	Explosives, Perchlorate, VOC
GPW-3	GPW-3-010717	07/17/01	Explosives, Perchlorate, VOC
GPW-3	GPW-3-011030	10/30/01	Explosives, Perchlorate, VOC
GPW-3	GPW-3-020115	01/15/02	Explosives, Perchlorate, VOC

Table 6-7
Sample Summary for Surface Water
Goose Prairie Creek

Location	Sample Number [a]	Date	Analyses
GPW-3	GPW-3-020618	06/18/02	Explosives, Perchlorate, VOC
GPW-3	GPW-3-020926	09/26/02	Explosives, Perchlorate, VOC
GPW-3	GPW-3-021204	12/04/02	Explosives, Perchlorate, VOC
GPW-3	GPW-3-030213	02/13/03	Explosives, Perchlorate, VOC
GPW-3	GPW-3-030619	06/19/03	Explosives, Perchlorate, VOC
GPW-4	GPW-4-960807	08/07/96	Explosives, SVOC, VOC
GPW-4	GPW-4AR-960810	08/10/96	SVOC, VOC
GPW-4	GPW-4-970206	02/06/97	VOC
GPW-4	GPW-4-970521	05/21/97	Explosives, VOC
GPW-4	GPW-4-970904	09/04/97	Explosives, VOC
GPW-4	GPW-4-971209	12/09/97	Explosives, VOC
GPW-4	GPW-4-980210	02/10/98	Explosives, VOC
GPW-4	GPW-4AR-980211	02/11/98	Explosives, VOC
GPW-4	GPW-4-980602	06/02/98	Explosives, VOC
GPW-4	GPW-4-990325	03/25/99	Explosives, VOC
GPW-4	GPW-4-QC	03/25/99	Explosives, VOC
GPW-4	GPW-4-990707	07/07/99	Explosives, Perchlorate, VOC
GPW-4	GPW-4-000204	02/04/00	Explosives, Perchlorate, VOC
GPW-4	GPW-4-000421	04/21/00	Explosives, Perchlorate, VOC
GPW-4	GPW-4-001205	12/05/00	Explosives, Perchlorate, VOC
GPW-4	GPW-4-010418	04/18/01	Explosives, Perchlorate, VOC
GPW-4	GPW-4QC	04/18/01	Explosives, Perchlorate, VOC
GPW-4	GPW-4-010717	07/17/01	Explosives, Perchlorate, VOC
GPW-4	GPW-4-011030	10/30/01	Perchlorate, VOC
GPW-4	GPW-4-020115	01/15/02	Explosives, Perchlorate, VOC
GPW-4	GPW-4-020618	06/18/02	Explosives, Perchlorate, VOC
GPW-4	GPW-4-020926	09/26/02	Explosives, Perchlorate, VOC
GPW-4	GPW-4-021204	12/04/02	Explosives, Perchlorate, VOC
GPW-4	GPW-4-030213	02/13/03	Explosives, Perchlorate, VOC
GPW-4	GPW-4-030619	06/19/03	Explosives, Perchlorate, VOC
GPW-5	GPW-5-960808	08/08/96	Explosives, SVOC, VOC
GPW-5	GPW-5AR-960810	08/10/96	SVOC, VOC
GPW-5	GPW-5-970206	02/06/97	VOC
GPW-5	GPW-5-970521	05/21/97	Explosives, VOC
GPW-5	GPW-5-970904	09/04/97	Explosives, VOC
GPW-5	GPW-5-971209	12/09/97	Explosives, VOC
GPW-5	GPW-5-980210	02/10/98	Explosives, VOC
GPW-5	GPW-5AR-980211	02/11/98	Explosives, VOC
GPW-5	GPW-5-980602	06/02/98	Explosives, VOC
GPW-5	GPW-5-990325	03/25/99	Explosives, VOC
GPW-5	GPW-5-990707	07/07/99	Explosives, Perchlorate, VOC
GPW-5	GPW-5-990924	09/24/99	Explosives, Perchlorate, VOC
GPW-5	GPW-5-000204	02/04/00	Explosives, Perchlorate, VOC
GPW-5	GPW-5-000421	04/21/00	Explosives, Perchlorate, VOC
GPW-5	GPW-5-001205	12/05/00	Explosives, Perchlorate
GPW-5	GPW-5-010418	04/18/01	Explosives, Perchlorate, VOC
GPW-5	GPW-5-010717	07/17/01	Explosives, Perchlorate, VOC
GPW-5	GPW-5-011030	10/30/01	Explosives, Perchlorate, VOC
GPW-5	GPW-5-020115	01/15/02	Explosives, Perchlorate
GPW-5	GPW-5-020618	06/18/02	Explosives, Perchlorate, VOC
GPW-5	GPW-5-020926	09/26/02	Explosives, Perchlorate, VOC
GPW-5	GPW-5-021204	12/04/02	Explosives, Perchlorate, VOC
GPW-5	GPW-5-030213	02/13/03	Explosives, Perchlorate, VOC
GPW-6	GPW-6-960808	08/08/96	Explosives, SVOC, VOC
GPW-6	C-GPW-6AR-960810	08/10/96	SVOC, VOC
GPW-6	GPW-6-970206	02/06/97	VOC
GPW-6	GPW-6-970521	05/21/97	Explosives, VOC
GPW-6	GPW-6-970904	09/04/97	Explosives, VOC
GPW-6	GPW-6-971209	12/09/97	Explosives, VOC

Table 6-7
Sample Summary for Surface Water
Goose Prairie Creek

Location	Sample Number [a]	Date	Analyses
GPW-6	GPW-6-980210	02/10/98	Explosives, VOC
GPW-6	C-GPW-6AR-980211	02/11/98	Explosives, VOC
GPW-6	GPW-6-980602	06/02/98	Explosives, VOC
GPW-6	GPW-6-990325	03/25/99	Explosives, VOC
GPW-6	GPW-6-990707	07/07/99	Explosives, Perchlorate, VOC
GPW-6	GPW-6-000204	02/04/00	Explosives, Perchlorate, VOC
GPW-6	GPW-6-000421	04/21/00	Explosives, Perchlorate, VOC
GPW-6	GPW-6-001205	12/05/00	Explosives, Perchlorate
GPW-6	GPW-6-010418	04/18/01	Explosives, Perchlorate, VOC
GPW-6	GPW-6-011030	10/30/01	Explosives, Perchlorate, VOC
GPW-6	GPW-6-020115	01/15/02	Explosives, Perchlorate
GPW-6	GPW-6-021204	12/04/02	Explosives, Perchlorate, VOC
GPW-6	GPW-6-030213	02/13/03	Explosives, Perchlorate, VOC
GPW-7	GPW-7-970206	02/06/97	VOC
GPW-7	GPW-7-970521	05/21/97	Explosives, VOC
GPW-7	GPW-7-970903	09/03/97	Explosives, VOC
GPW-7	GPW-7-971209	12/09/97	Explosives, VOC
GPW-7	GPW-7-980210	02/10/98	Explosives, VOC
GPW-7	GPW-7AR	02/11/98	Explosives, VOC
GPW-7	GPW-7-980602	06/02/98	Explosives
GPW-7	GPW-7-990325	03/25/99	Explosives, VOC
GPW-7	GPW-7-990707	07/07/99	Explosives, Perchlorate, VOC
GPW-7	GPW-7-000204	02/04/00	Explosives, Perchlorate, VOC
GPW-7	C-GPW-7QC-000420	04/20/00	Explosives, Perchlorate, VOC
GPW-7	GPW-7-000420	04/20/00	Explosives, Perchlorate, VOC
GPW-7	GPW-7-001205	12/05/00	Explosives, Perchlorate, VOC
GPW-7	GPW-7-010418	04/18/01	Explosives, Perchlorate, VOC
GPW-7	GPW-7-011030	10/30/01	Explosives, Perchlorate, VOC
GPW-7	GPW-7-020115	01/15/02	Explosives, Perchlorate, VOC
GPW-7	GPW-7-020926	09/26/02	Explosives, Perchlorate, VOC
GPW-7	GPW-7-021204	12/04/02	Explosives, Perchlorate, VOC
GPW-7	C-GPW-7QC-030213	02/13/03	Explosives, Perchlorate, VOC
GPW-7	GPW-7-030213	02/13/03	Explosives, Perchlorate, VOC
GPW-7	GPW-7-030619	06/19/03	Explosives, Perchlorate, VOC
GPW-8	GPW-8-970206	02/06/97	VOC
GPW-8	GPW-8-970521	05/21/97	Explosives, VOC
GPW-8	GPW-8 QC	09/04/97	Explosives, VOC
GPW-8	GPW-8-970904	09/04/97	Explosives, VOC
GPW-8	GPW-8-971209	12/09/97	Explosives, VOC
GPW-9	GPW-9-970206	02/06/97	VOC
GPW-9	GPW-9-970521	05/21/97	Explosives, VOC
GPW-9	GPW-9-970904	09/04/97	Explosives, VOC
GPW-9	GPW-9-971209	12/09/97	Explosives, VOC
GPW-9	GPW-9-980210	02/10/98	Explosives, VOC
GPW-9	GPW-9AR	02/11/98	Explosives, VOC
GPW-9	GPW-9-980602	06/02/98	Explosives, VOC
GPW-9	GPW-9-990325	03/25/99	Explosives, VOC
GPW-9	GPW-9-990707	07/07/99	Explosives, Perchlorate, VOC
GPW-9	GPW-9-000204	02/04/00	Explosives, Perchlorate, VOC
GPW-9	GPW-9-000421	04/21/00	Explosives, Perchlorate, VOC
GPW-9	GPW-9-001205	12/05/00	Explosives, Perchlorate
GPW-9	GPW-9-010418	04/18/01	Explosives, Perchlorate, VOC
GPW-9	GPW-9-020115	01/15/02	Explosives, Perchlorate, VOC
GPW-9	GPW-9-021204	12/04/02	Explosives, Perchlorate, VOC
GPW-9	GPW-9-030213	02/13/03	Explosives, Perchlorate, VOC
GPW-9	GPW-9-030619	06/19/03	Explosives, Perchlorate, VOC
GPWSW01	GPWSW01-981119	11/19/98	Dioxins/Furans, Explosives, General Chemistry, Metals, Pest/PCB, SVOC, VOC
GPWSW01	GPWSW01QC	11/19/98	Dioxins/Furans, Explosives, General Chemistry, Metals, Pest/PCB, SVOC, VOC
GPWSW02	GPWSW02-981201	12/01/98	Explosives, General Chemistry, Metals, SVOC, VOC

Table 6-7
Sample Summary for Surface Water
Goose Prairie Creek

Location	Sample Number [a]	Date	Analyses
GPWSW02	GPWSW02-981202	12/02/98	Pest/PCB
GPWSW03	GPWSW03-981201	12/01/98	Explosives, General Chemistry, Metals, SVOC, VOC
GPWSW03	GPWSW03-981202	12/02/98	Pest/PCB
GPWSW04	GPWSW04-981120	11/20/98	Dioxins/Furans, Explosives, General Chemistry, Metals, Pest/PCB, SVOC, VOC
LHS-GPC-01	LHS-GPC-01	01/11/95	Metals, SVOC, VOC
LHS-GPC-01	LHS-GPC-01QC	01/11/95	Metals, SVOC, VOC
LHS-GPC-03	LHS-GPC-03	01/12/95	Metals, SVOC, VOC
LHS-GPC-05	LHS-GPC-05	01/12/95	Metals, SVOC, VOC
LHS-GPC-07	LHS-GPC-07	01/12/95	Metals, SVOC, VOC

Notes:
[a] Field duplicate samples are identified by the addtion of QC to the sample number.
PCB Polychlorinated biphenyls
Pest Pesticides
SVOC Semivolatile organic compounds
VOC Volatile organic compounds

Table 6-8
Sample Summary for Sediment
Goose Prairie Creek

Location	Sample Number [a]	Date	Analyses
29SD12	29SD12(0-0.5)	04/27/93	Explosives, General Chemistry, Metals, SVOC, VOC
29SD13	29SD13(0-0.5)	04/27/93	Explosives, General Chemistry, Metals, SVOC, VOC
29SD13	29SD13(0-0.5)QC	04/27/93	Explosives, General Chemistry, Metals, SVOC, VOC
29SD14	29SD14(0.5)	04/30/93	Explosives, General Chemistry, Metals, SVOC, VOC
29SD15	29SD15(0-0.5)	04/27/93	Explosives, General Chemistry, Metals, SVOC, VOC
29SD16	29SD16(0-0.5)	04/27/93	Explosives, General Chemistry, Metals, SVOC, VOC
29SD17	29SD17(0.5)	04/30/93	Explosives, General Chemistry, Metals, SVOC, VOC
29SD22	29SD22	10/07/98	Explosives, Metals, VOC
29SD27	29SD27	10/08/98	Dioxins/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
29SD29	29SD29	10/06/98	Explosives, Metals, VOC
29SD30	29SD30	10/07/98	Dioxins/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
29SD31	29SD31	10/07/98	Explosives, Metals, VOC
32SD01	32SD01(0.5)	04/30/93	Explosives, General Chemistry, Metals, SVOC, VOC
32SD01	32SD01(0.5)QC	04/30/93	General Chemistry, Metals, SVOC, VOC
32SD02	32SD02(0.5)	04/30/93	Explosives, General Chemistry, Metals, SVOC, VOC
32SD03	32SD03(0.5)	04/30/93	Explosives, General Chemistry, Metals, SVOC, VOC
32SD04	32SD04(0.5)	04/30/93	Explosives, General Chemistry, Metals, SVOC, VOC
32SD08	32SD08(000.0)	04/12/95	Explosives, Metals
32SD09	32SD09(000.0)	04/12/95	Explosives, Metals
32SD10	32SD10(000.0)	02/20/95	Explosives, Metals
32SD14	32SD14(000.0)	02/19/95	Explosives, Metals
32SD15	32SD15(000.0)	02/19/95	Explosives, Metals
32SD16	32SD16(000.0)	02/19/95	Explosives, Metals
32SD19	32SD19-981008	10/08/98	Dioxins/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
35ASD01	35ASD01-981109	11/09/98	Dioxins/Furans, Explosives, General Chemistry, Metals, Pest/PCB, SVOC, VOC
35ASD01	35ASD01-981203	12/03/98	Pest/PCB
35ASD02	35ASD02-981109	11/09/98	Explosives, General Chemistry, Metals, SVOC, VOC
35ASD02	35ASD02-981203	12/03/98	Pest/PCB
46SD03	46SD03-981110	11/10/98	Explosives, General Chemistry, Metals, SVOC, VOC
46SD03	46SD03-981203	12/03/98	Pest/PCB
46SD04	46SD04-981110	11/10/98	Explosives, General Chemistry, Metals, SVOC, VOC
46SD04	46SD04-981207	12/07/98	Pest/PCB
46SD07	46SD07-981110	11/10/98	Explosives, General Chemistry, Metals, SVOC, VOC
46SD07	46SD07-981203	12/03/98	Pest/PCB
46SD08	46SD08-981110	11/10/98	Explosives, General Chemistry, Metals, SVOC, VOC
46SD08	46SD08-981203	12/03/98	Pest/PCB
50SD01	LH50SD01(0-1)	11/29/95	Explosives, Metals, SVOC, VOC
50SD01	LH50SD01(0-1)QC	11/29/95	Explosives, Metals, SVOC, VOC
50SD02	LH50SD02(0-1)	11/29/95	Explosives, Metals, SVOC, VOC
50SD03	50SD03-981112	11/12/98	Explosives, General Chemistry, Metals, SVOC, VOC
50SD04	50SD04-981111	11/11/98	Explosives, General Chemistry, Metals, SVOC, VOC
50SD05	50SD05-981111	11/11/98	Explosives, General Chemistry, Metals, SVOC, VOC
50SD06	50SD06-981110	11/10/98	Explosives, General Chemistry, Metals, Pest/PCB, SVOC, VOC
50SD06	C-50SD06QC-981110	11/10/98	Explosives, General Chemistry, Metals, Pest/PCB, SVOC, VOC
50SD06	50SD06-981111	11/11/98	Dioxins/Furans
50SD06	C-50SD06QC-981111	11/11/98	Dioxins/Furans
50SD07	50SD07-981111	11/11/98	Explosives, General Chemistry, Metals, SVOC, VOC
50SD08	50SD08-981111	11/11/98	Dioxins/Furans, Explosives, General Chemistry, Metals, Pest/PCB, SVOC, VOC
60SD01	60SD01-981110	11/10/98	Pesticides
60SD02	60SD02-981110	11/10/98	Pesticides
60SD02	60SD02QC	11/10/98	Pesticides
CL-GPSN-1	CL-GPSN-1 (1)	08/10/00	Explosives, General Chemistry, Metals, Pesticides, SVOC, VOC
CL-GPSN-1	CL-GPSN-1 (2)	08/10/00	Explosives, General Chemistry, Metals, Pesticides, SVOC, VOC
CL-GPSN-1	CL-GPSN-1(1)	08/10/00	General Chemistry, Perchlorate
CL-GPSN-1	CL-GPSN-1(2)	08/10/00	General Chemistry, Perchlorate
CL-GPSN-2	CL-GPSN-2 (1)	08/10/00	Explosives, General Chemistry, Metals, Pesticides, SVOC, VOC
CL-GPSN-2	CL-GPSN-2 (2)	08/10/00	Explosives, General Chemistry, Metals, Pesticides, SVOC, VOC
CL-GPSN-2	CL-GPSN-2(1)	08/10/00	General Chemistry, Perchlorate
CL-GPSN-2	CL-GPSN-2(2)	08/10/00	General Chemistry, Perchlorate

Table 6-8
Sample Summary for Sediment
Goose Prairie Creek

Location	Sample Number [a]	Date	Analyses
CL-GPSN-3	CL-GPSN-3 (1)	08/10/00	Explosives, General Chemistry, Metals, Pesticides, SVOC, VOC
CL-GPSN-3	CL-GPSN-3 (2)	08/10/00	Explosives, General Chemistry, Metals, Pesticides, SVOC, VOC
CL-GPSN-3	CL-GPSN-3 (2) QC	08/10/00	Explosives, General Chemistry, Metals, Pesticides, SVOC, VOC
CL-GPSN-3	CL-GPSN-3(1)	08/10/00	General Chemistry, Perchlorate
CL-GPSN-3	CL-GPSN-3(2)	08/10/00	General Chemistry, Perchlorate
CL-GPSN-3	CL-GPSN-3(2) QC	08/10/00	General Chemistry, Perchlorate
CL-GPSN-4	CL-GPSN-4 (1)	08/10/00	Explosives, General Chemistry, Metals, Pesticides, SVOC, VOC
CL-GPSN-4	CL-GPSN-4 (2)	08/10/00	Explosives, General Chemistry, Metals, Pesticides, SVOC, VOC
CL-GPSN-4	CL-GPSN-4(1)	08/10/00	General Chemistry, Perchlorate
CL-GPSN-4	CL-GPSN-4(2)	08/10/00	General Chemistry, Perchlorate
CL-GPSS-1	CL-GPSS-1 (1)	08/09/00	Explosives, General Chemistry, Metals, Pesticides, SVOC, VOC
CL-GPSS-1	CL-GPSS-1 (2)	08/09/00	Explosives, General Chemistry, Metals, Pesticides, SVOC, VOC
CL-GPSS-1	CL-GPSS-1(1)	08/09/00	General Chemistry, Perchlorate
CL-GPSS-1	CL-GPSS-1(2)	08/09/00	General Chemistry, Perchlorate
CL-GPSS-2	CL-GPSS-2 (1)	08/09/00	Explosives, General Chemistry, Metals, Pesticides, SVOC, VOC
CL-GPSS-2	CL-GPSS-2 (1) QC	08/09/00	Explosives, General Chemistry, Metals, Pesticides, SVOC, VOC
CL-GPSS-2	CL-GPSS-2 (2)	08/09/00	Explosives, General Chemistry, Metals, Pesticides, SVOC, VOC
CL-GPSS-2	CL-GPSS-2(1)	08/09/00	General Chemistry, Perchlorate
CL-GPSS-2	CL-GPSS-2(1)QC	08/09/00	General Chemistry, Perchlorate
CL-GPSS-2	CL-GPSS-2(2)	08/09/00	General Chemistry, Perchlorate
CL-GPSS-3	CL-GPSS-3 (1)	08/09/00	Explosives, General Chemistry, Metals, Pesticides, SVOC, VOC
CL-GPSS-3	CL-GPSS-3 (2)	08/09/00	Explosives, General Chemistry, Metals, Pesticides, SVOC, VOC
CL-GPSS-3	CL-GPSS-3(1)	08/09/00	General Chemistry, Perchlorate
CL-GPSS-3	CL-GPSS-3(2)	08/09/00	General Chemistry, Perchlorate
CL-GPSS-4	CL-GPSS-4 (1)	08/09/00	Explosives, General Chemistry, Metals, Pesticides, SVOC, VOC
CL-GPSS-4	CL-GPSS-4 (2)	08/09/00	Explosives, General Chemistry, Metals, Pesticides, SVOC, VOC
CL-GPSS-4	CL-GPSS-4(1)	08/09/00	General Chemistry, Perchlorate
CL-GPSS-4	CL-GPSS-4(2)	08/09/00	General Chemistry, Perchlorate
FWS-225	CLNWR225	09/09/03	Metals, Pesticides, SVOC
FWS-227	CLNWR227	09/09/03	Metals, Pesticides, SVOC
GPCSD01	GPCSD01-981118	11/18/98	Explosives, General Chemistry, Metals, SVOC, VOC
GPCSD01	GPCSD01-981202	12/02/98	Pest/PCB
GPCSD02	GPCSD02-981118	11/18/98	Explosives, General Chemistry, Metals, SVOC, VOC
GPCSD02	GPCSD02-981202	12/02/98	Pest/PCB
GPCSD03	GPCSD03	11/17/98	Dioxins/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
GPCSD04	GPCSD04-981116	11/16/98	Explosives, General Chemistry, Metals, SVOC, VOC
GPCSD04	GPCSD04-981202	12/02/98	Pest/PCB
GPCSD05	GPCSD05-981116	11/16/98	Explosives, General Chemistry, Metals, SVOC, VOC
GPCSD05	GPCSD05-981202	12/02/98	Pest/PCB
GPCSD06	GPCSD06	11/16/98	Dioxins/Furans, Explosives, General Chemistry, Metals, Pest/PCB, SVOC, VOC
GPCSD06	GPCSD06QC	11/16/98	Dioxins/Furans, Explosives, General Chemistry, Metals, Pest/PCB, SVOC, VOC
GPCSD07	GPCSD07-981116	11/16/98	Explosives, General Chemistry, Metals, SVOC, VOC
GPCSD07	GPCSD07-981203	12/03/98	Pest/PCB
GPCSD08	GPCSD08	11/11/98	Dioxins/Furans, Explosives, General Chemistry, Metals, Pest/PCB, SVOC, VOC
GPCSD10	GPCSD10-981111	11/11/98	Explosives, General Chemistry, Metals, SVOC, VOC
GPCSD10	GPCSD10-981203	12/03/98	Pest/PCB
GPS-1	GPS-1	08/07/96	VOC
GPS-11	GPS-11	09/04/97	Explosives, VOC
GPS-12	GPS-12	09/04/97	Explosives, VOC
GPS-2	GPS-2	08/07/96	VOC
GPS-3	GPS-3	08/07/96	VOC
GPS-4	GPS-4	08/07/96	VOC
GPS-5	GPS-5	08/08/96	VOC
GPS-6	GPS-6	08/08/96	VOC
GPWSD01	GPWSD01	11/19/98	Dioxins/Furans, Explosives, General Chemistry, Metals, Pest/PCB, SVOC, VOC
GPWSD01	GPWSD01QC	11/19/98	Dioxins/Furans, Explosives, General Chemistry, Metals, Pest/PCB, SVOC, VOC
GPWSD02	GPWSD02-981201	12/01/98	Explosives, General Chemistry, Metals, SVOC, VOC
GPWSD02	GPWSD02-981202	12/02/98	Pest/PCB

Table 6-8
Sample Summary for Sediment
Goose Prairie Creek

Location	Sample Number [a]	Date	Analyses
GPWSD03	GPWSD03-981201	12/01/98	Explosives, General Chemistry, Metals, SVOC, VOC
GPWSD03	GPWSD03-981202	12/02/98	Pest/PCB
GPWSD04	GPWSD04-981120	11/20/98	Dioxins/Furans, Explosives, General Chemistry, Metals, Pest/PCB, SVOC, VOC
LHS-GPC-02	LHS-GPC-02	01/12/95	Explosives, Metals, SVOC, VOC
LHS-GPC-04	LHS-GPC-04	01/12/95	Explosives, Metals, SVOC, VOC
LHS-GPC-06	LHS-GPC-06	01/12/95	Explosives, Metals, SVOC, VOC
LHS-GPC-08	LHS-GPC-08	01/12/95	Explosives, Metals, SVOC, VOC

Notes:

[a] Field duplicate samples are identified by the addtion of QC to the sample number.

PCB Polychlorinated biphenyls
Pest Pesticides
SVOC Semivolatile organic compounds
VOC Volatile organic compounds

Table 6-9
Sample Summary for Surface Water
Central Creek

Location	Sample Number [a]	Date	Analyses
11SW13	LH11-SW13	03/31/93	Explosives, General Chemistry, Metals, SVOC, VOC
11SW14	LH11-SW14	03/31/93	Explosives, General Chemistry, Metals, SVOC, VOC
12SW01	C-12SW01-930518	05/18/93	Explosives, General Chemistry, Metals, SVOC, VOC
12SW02	12SW02	05/04/93	Explosives, General Chemistry, Metals, SVOC, VOC
12SW03	12SW03	05/18/93	Explosives, General Chemistry, Metals, SVOC, VOC
12SW04	12SW04(WATER)	02/18/95	Explosives, Metals, VOC
12SW05	12SW05(WATER)	02/18/95	Explosives, Metals, VOC
12SW06	12SW06(WATER)	02/18/95	Explosives, Metals, VOC
12SW07	12SW07(WATER)	02/18/95	Explosives, Metals, VOC
12SW08	12SW08(WATER)	02/18/95	Explosives, Metals, VOC
12SW08	12SW08(WATER)QC	02/18/95	Explosives, Metals, VOC
12SW09	12SW09(WATER)	02/18/95	Explosives, Metals, VOC
12SW10	12SW10(WATER)	03/15/95	Explosives, Metals, VOC
12SW11	12SW11(WATER)	03/15/95	Explosives, Metals, VOC
12SW12	12SW12(WATER)	03/15/95	Explosives, Metals, VOC
12SW13	12SW13(WATER)	03/01/95	Explosives, Metals, VOC
12SW14	12SW14(WATER)	03/02/95	Explosives, Metals, VOC
12SW15	12SW15	10/06/98	Dioxins/Furans, Explosives, General Chemistry, Metals, Pest/PCB, SVOC, VOC
12SW15	12SW15QC	10/06/98	Dioxins/Furans, Explosives, General Chemistry, Metals, Pest/PCB, SVOC, VOC
12SW16	12SW16	10/06/98	Explosives, General Chemistry, Metals, VOC
12SW17	12SW17A	10/06/98	Dioxins/Furans, Explosives, General Chemistry, Metals, Pest/PCB, SVOC, VOC
12SW18	12SW18	10/06/98	Explosives, General Chemistry, Metals, VOC
12SW19	12SW19	10/07/98	Dioxins/Furans, Explosives, General Chemistry, Metals, Pest/PCB, SVOC, VOC
29SW02	29SW02	05/25/93	Explosives, General Chemistry, Metals, SVOC, VOC
29SW03	29SW03	05/19/93	Explosives, General Chemistry, Metals, SVOC, VOC
29SW04	29SW04	05/19/93	Explosives, General Chemistry, Metals, SVOC, VOC
29SW05	29SW05	05/13/93	Explosives, General Chemistry, Metals, SVOC, VOC
29SW06	29SW06	05/20/93	Explosives, General Chemistry, Metals, SVOC, VOC
29SW07	29SW07	05/13/93	Explosives, General Chemistry, Metals, SVOC, VOC
29SW08	29SW08	05/12/93	Explosives, General Chemistry, Metals, SVOC, VOC
29SW09	29SW09	05/12/93	Explosives, General Chemistry, Metals, SVOC, VOC
29SW09	29SW09-QC	05/12/93	Explosives, General Chemistry, Metals, SVOC, VOC
29SW18	29SW18	05/03/93	Explosives, General Chemistry, Metals, SVOC, VOC
29SW19	29SW19(WATER)	02/22/95	Explosives, Metals
29SW20	29SW20(WATER)	03/01/95	Explosives, Metals
29SW21	29SW21(WATER)	02/22/95	Explosives, Metals
29SW23	29SW23	10/06/98	Dioxins/Furans, Explosives, General Chemistry, Metals, Pest/PCB, SVOC, VOC
29SW23	29SW23QC	10/06/98	Dioxins/Furans, Explosives, General Chemistry, Metals, Pest/PCB, SVOC, VOC
29SW25	29SW25	10/06/98	Explosives, General Chemistry, Metals, VOC
29SW28	29SW28	10/06/98	Explosives, General Chemistry, Metals, VOC
GPCSW09	GPCSW09-981111	11/11/98	Explosives, General Chemistry, Metals, SVOC, VOC
GPCSW09	GPCSW09-981203	12/03/98	Pest/PCB

Notes:

[a] Field duplicate samples are identified by the addtion of QC to the sample number.

PCB Polychlorinated biphenyls

Pest Pesticides

SVOC Semivolatile organic compounds

VOC Volatile organic compounds

Table 6-10
Sample Summary for Sediment
Central Creek

Location	Sample Number [a]	Date	Analyses
11SD14	LH11-SD14	03/31/93	Explosives, General Chemistry, Metals, SVOC, VOC
11SD14	C940823-11SD14-N00	08/23/94	Explosives, General Chemistry, Metals, SVOC, VOC
11SD14	C940823-11SD14-QC00	08/23/94	Explosives, General Chemistry, Metals, SVOC, VOC
12SD01	12SD01	04/22/93	Explosives, General Chemistry, Metals, SVOC, VOC
12SD02	12SD02	04/22/93	Explosives, General Chemistry, Metals, SVOC, VOC
12SD03	12SD03(0-0.5)	05/03/93	Explosives, General Chemistry, Metals, SVOC, VOC
12SD04	12SD04(000.0)	02/18/95	Explosives, Metals, VOC
12SD05	12SD05(000.0)	02/18/95	Explosives, Metals, VOC
12SD06	12SD06(000.0)	02/18/95	Explosives, Metals, VOC
12SD07	12SD07(000.0)	02/18/95	Explosives, Metals, VOC
12SD08	12SD08(000.0)	02/18/95	Explosives, Metals, VOC
12SD08	12SD08(000.0)QC	02/18/95	Explosives, Metals, VOC
12SD09	12SD09(000.0)	02/18/95	Explosives, Metals, VOC
12SD10	12SD10 (000.0)	03/15/95	Explosives, Metals, VOC
12SD11	12SD11 (000.0)	03/15/95	Explosives, Metals, VOC
12SD12	12SD12 (000.0)	03/15/95	Explosives, Metals, VOC
12SD13	12SD13(000.0)	03/01/95	Explosives, Metals, VOC
12SD14	12SD14(000.0)	03/02/95	Explosives, Metals, VOC
12SD15	12SD15	10/06/98	Dioxins/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
12SD15	12SD15QC	10/06/98	Dioxins/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
12SD16	12SD16	10/06/98	Explosives, Metals, VOC
12SD17	12SD17	10/06/98	Dioxins/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
12SD18	12SD18	10/06/98	Explosives, Metals, VOC
12SD19	12SD19	10/07/98	Dioxins/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
12SW01	12SW01	04/18/93	VOC
29SD02	29SD02(0.5)	04/29/93	Explosives, General Chemistry, Metals, SVOC, VOC
29SD03	29SD03(0.5)	04/29/93	Explosives, General Chemistry, Metals, SVOC, VOC
29SD04	29SD04(0.5)	04/29/93	Explosives, General Chemistry, Metals, SVOC, VOC
29SD05	29SD05(0.5)	04/29/93	Explosives, General Chemistry, Metals, SVOC, VOC
29SD06	29SD06(0.5)	04/28/93	Explosives, General Chemistry, Metals, SVOC, VOC
29SD07	29SD07(0.5)	04/28/93	Explosives, General Chemistry, Metals, SVOC, VOC
29SD08	29SD08(0-0.5)	04/28/93	Explosives, General Chemistry, Metals, SVOC, VOC
29SD08	29SD08(0-0.5)QC	04/28/93	Explosives, General Chemistry, Metals, SVOC, VOC
29SD09	29SD09(0-0.5)	04/28/93	Explosives, General Chemistry, Metals, SVOC, VOC
29SD18	29SD18(0-0.5)	05/03/93	Explosives, General Chemistry, Metals, SVOC, VOC
29SD19	29SD19 (000.0)	02/22/95	Explosives, Metals
29SD20	29SD20(000.0)	03/01/95	Explosives, Metals
29SD21	29SD21 (000.0)	02/22/95	Explosives, Metals
29SD23	29SD23	10/06/98	Dioxins/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
29SD23	29SD23QC	10/06/98	Dioxins/Furans, Explosives, Metals, Pest/PCB, SVOC, VOC
29SD25	29SD25	10/06/98	Explosives, Metals, VOC
29SD28	29SD28	10/06/98	Explosives, Metals, VOC
CL-CCS-1	CL-CCS-1 (1)	10/19/00	Explosives, General Chemistry, Metals, Perchlorate, Pesticides, SVOC, VOC
CL-CCS-1	CL-CCS-1 (2)	10/19/00	Explosives, General Chemistry, Metals, Perchlorate, Pesticides, SVOC, VOC
CL-CCS-1	CL-CCS-1(1)	10/19/00	Dioxins/Furans, General Chemistry
CL-CCS-2	CL-CCS-2 (1)	10/19/00	Explosives, General Chemistry, Metals, Perchlorate, Pesticides, SVOC, VOC
CL-CCS-2	CL-CCS-2 (1)QC	10/19/00	Explosives, General Chemistry, Metals, Perchlorate, Pesticides, SVOC, VOC
CL-CCS-2	CL-CCS-2 (2)	10/19/00	Explosives, General Chemistry, Metals, Perchlorate, Pesticides, SVOC, VOC
CL-HBS-1	CL-HBS-1 (1)	10/18/00	Explosives, General Chemistry, Metals, Perchlorate, Pesticides, SVOC, VOC
CL-HBS-1	CL-HBS-1 (2)	10/18/00	Explosives, General Chemistry, Metals, Perchlorate, Pesticides, SVOC, VOC
CL-HBS-2	CL-HBS-2 (1)	10/18/00	Explosives, General Chemistry, Metals, Perchlorate, Pesticides, SVOC, VOC
CL-HBS-2	CL-HBS-2 (2)	10/18/00	Explosives, General Chemistry, Metals, Perchlorate, Pesticides, SVOC, VOC
CL-HBS-2	CL-HBS-2(1)	10/18/00	Dioxins/Furans, General Chemistry
CL-HBS-2	CL-HBS-2(1)QC	10/18/00	Dioxins/Furans, General Chemistry
CL-HBS-3	CL-HBS-3 (1)	10/18/00	Explosives, General Chemistry, Metals, Perchlorate, Pesticides, SVOC, VOC
CL-HBS-3	CL-HBS-3 (1)QC	10/18/00	Explosives, General Chemistry, Metals, Perchlorate, Pesticides, SVOC, VOC
CL-HBS-3	CL-HBS-3 (2)	10/18/00	Explosives, General Chemistry, Metals, Perchlorate, Pesticides, SVOC, VOC
CL-HBS-4	CL-HBS-4 (1)	10/18/00	Explosives, General Chemistry, Metals, Perchlorate, Pesticides, SVOC, VOC
CL-HBS-4	CL-HBS-4 (2)	10/18/00	Explosives, General Chemistry, Metals, Perchlorate, Pesticides, SVOC, VOC
CL-HBS-4	CL-HBS-4(1)	10/18/00	Dioxins/Furans, General Chemistry
FWS-118	CLNWR118	09/09/03	Dioxins/Furans, Metals, Pesticides, SVOC
FWS-180	CLNWR180	09/09/03	Metals, Pesticides, SVOC
FWS-182	CLNWR182	09/09/03	Metals, Pesticides, SVOC
FWS-215	CLNWR215	09/09/03	Metals, Pesticides, SVOC
FWS-224	CLNWR224	09/09/03	Metals, Pesticides, SVOC
GPCSD09	GPCSD09-981111	11/11/98	Explosives, General Chemistry, Metals, SVOC, VOC
GPCSD09	GPCSD09-981203	12/03/98	Pest/PCB

Notes:

[a] Field duplicate samples are identified by the addtion of QC to the sample number.

PCB Polychlorinated biphenyls

Pest Pesticides

SVOC Semivolatile organic compounds

VOC Volatile organic compounds

Table 6-11
Sample Summary for Surface Water
Saunders Branch

Location	Sample Number [a]	Date	Analyses
18SW16	18SW16(WATER)	2/21/95	Metals, VOC
18SW16	18SW16(WATER)QC	2/21/95	Metals, VOC
18SW17	18SW17(WATER)	3/5/95	Metals, VOC
18SW18	18SW18(WATER)	3/5/95	Metals, VOC
18SW19	18SW19(WATER)	3/5/95	Metals, VOC
XXSW17	LHXX-SW17	3/31/93	Explosives, General Chemistry, Metals, SVOC, VOC
XXSW18	LHXX-SW18	3/31/93	Explosives, General Chemistry, Metals, SVOC, VOC
XXSW19	LHXX-SW19	3/31/93	Explosives, General Chemistry, Metals, SVOC, VOC
XXSW20	LHXX-SW20	4/1/93	Explosives, General Chemistry, Metals, SVOC, VOC

Notes:

[a] Field duplicate samples are identified by the addtion of QC to the sample number.

SVOC semivolatile organic compounds

VOC volatile organic compounds

Table 6-12
Sample Summary for Sediment
Saunders Branch

Location	Sample Number [a]	Date	Analyses
18SD16	18SD16 (000.0)	02/21/95	Metals, VOC
18SD16	18SD16 QC (000.	02/21/95	Metals, VOC
18SD17	18SD17(000.0)	03/05/95	Metals, VOC
18SD18	18SD18(000.0)	03/05/95	Metals, VOC
18SD19	18SD19(000.0)	03/05/95	Metals, VOC
CL-SBS-1	CL-SBS-1 (1)	10/19/00	Explosives, General Chemistry, Metals, Perchlorate, Pest, SVOC, VOC
CL-SBS-1	CL-SBS-1 (2)	10/19/00	Explosives, General Chemistry, Metals, Perchlorate, Pest, SVOC, VOC
CL-SBS-2	CL-SBS-2 (1)	10/19/00	Explosives, General Chemistry, Metals, Perchlorate, Pest, SVOC, VOC
CL-SBS-2	CL-SBS-2 (2)	10/19/00	Explosives, General Chemistry, Metals, Perchlorate, Pest, SVOC, VOC
CL-SBS-2	CL-SBS-2(1)	10/19/00	Dioxins/Furans, General Chemistry
FWS-139	CLNWR139	09/09/03	Metals, Pest, SVOC
FWS-157	CLNWR157	09/09/03	Dioxins/Furans, Metals, Pest, SVOC
XXSD17	LHXX-SD17	03/31/93	Explosives, General Chemistry, Metals, SVOC, VOC
XXSD17	C940822-XXSD17-N00	08/22/94	Metals
XXSD18	C930330-XXSD18-N00	03/30/93	Explosives, General Chemistry, Metals, SVOC, VOC
XXSD18	LHXX-SD18	03/31/93	Explosives, General Chemistry, Metals, SVOC, VOC
XXSD19	C930319-XXSD19-N00	03/19/93	Explosives, General Chemistry, Metals, SVOC, VOC
XXSD19	LHXX-SD19	03/31/93	Explosives, General Chemistry, Metals, SVOC, VOC
XXSD20	LHXX-SD20	04/01/93	Explosives, General Chemistry, Metals, SVOC, VOC

Notes:

[a] Field duplicate samples are identified by the addtion of QC to the sample number.

Pest Pesticides

SVOC Semivolatile organic compounds

VOC Volatile organic compounds

Table 6-13

Toxicity Equivalent Factors[a] for Dioxin/Furan Congeners Used to Develop the 2,3,7,8-TCDD Toxic Equivalency Quotient Concentrations for the Step 3 Evaluation

Congener	Human/Mammals	Fish	Birds	*Maximum Value Used for 2,3,7,8-TCDD TEQ*
2,3,7,8-TCDD	1	1	1	*1*
1,2,3,7,8-PentaCDD	1	1	1	*1*
1,2,3,4,7,8-HexaCDD	0.1	0.5	0.05	*0.5*
1,2,3,6,7,8-HexaCDD	0.1	0.01	0.01	*0.1*
1,2,3,7,8,9-HexaCDD	0.1	0.01	0.1	*0.1*
1,2,3,4,6,7,8-HeptaCDD	0.01	0.001	0.001	*0.01*
OctaCDD	0.0001	0.0001	0.0001	*0.0001*
2,3,7,8-TetraCDF	0.1	0.05	1	*1*
1,2,3,7,8-PentaCDF	0.05	0.05	0.1	*0.1*
2,3,4,7,8-PentaCDF	0.5	0.5	1	*1*
1,2,3,4,7,8-HexaCDF	0.1	0.1	0.1	*0.1*
1,2,3,6,7,8-HexaCDF	0.1	0.1	0.1	*0.1*
1,2,3,7,8,9-HexaCDF	0.1	0.1	0.1	*0.1*
2,3,4,6,7,8-HexaCDF	0.1	0.1	0.1	*0.1*
1,2,3,4,6,7,8-HeptaCDF	0.01	0.01	0.01	*0.01*
1,2,3,4,7,8,9-HeptaCDF	0.01	0.01	0.01	*0.01*
OctaCDF	0.0001	0.0001	0.0001	*0.0001*

Notes:

[a] Van den Berg, M. et al., 1998, Toxic Equivalency Factors (TEFs) for PCBs, PCDDs, PCDFs for Humans and Wildlife. Environmental Health Perspectives 106(12):775-792.

Shaded boxes are the highest TEF.

TCDD Tetrachlorodibenzodioxin
TEF toxic equivalency factor
TEQ toxic equivalency quotient

Table 6-14
Selection of Ecological Soil Screening Toxicity Values for Detected Constituents at LHAAP

	Ecological Soil Screening Levels (2005) [a]				TCEQ Benchmarks (2005) [b]		Proposed Benchmarks				
	Plants (mg/kg)	Inverts. (mg/kg)	Birds (mg/kg)	Mammals (mg/kg)	Earthworms (mg/kg)	Plants (mg/kg)	Ecological PRGs Efroymson (1997) [c] (mg/kg)	Region 5 ESLs (2003) [d] (mg/kg)	Region 4 Screening Values (2001) [e] (mg/kg)	Talmage et al. (1999) [f] (mg/kg)	Final Ecological Screening Value Soil (mg/kg)
Aluminum	Narrative				Narrative						NVA
Antimony	NVA	78	NVA	0.27	78	5	5				0.27
Arsenic	18	NVA	43	46	60	18	9.9				18
Barium	NVA	330	NVA	2000	330	500	283				330
Beryllium	NVA	40	NVA	21	40	10	10				21
Boron					NVA	0.5					0.5
Cadmium	32	140	0.77	0.36	140	32	4				0.36
Calcium								NVA	NVA		NVA/Nutrient
Chloride								NVA	NVA		NVA/Nutrient
Chromium (Cr-III)	NVA	NVA	26	34							
Chromium (Cr-VI)	NVA	NVA	NVA	81							0.4
Chromium (unspecified)					0.4	1	0.4				
Cobalt	13	NVA	120	230	NVA	13	20				13
Copper					61	100	60				61
Cyanide									5		5
Iron	Narrative				NVA	NVA		NVA	200		200
Lead	120 [g]	1700 [g]	11	56	1700	120					11
Magnesium								NVA	440000		440000/Nutrient
Manganese					NVA	500					500
Mercury					0.1	0.3					0.1
Molybdenum					NVA	2			2		2
Nickel					200	30					30
Nitrate								NVA	NVA		NVA
Perchlorate								NVA	NVA		NVA
Potassium								NVA	NVA		NVA/Nutrient
Selenium					70	1					1
Silver					NVA	2	2				2
Sodium								NVA	NVA		NVA/Nutrient
Strontium					NVA	NVA		NVA	NVA		NVA
Sulfate								NVA	NVA		NVA
Thallium					NVA	NVA	1				1
Vanadium	NVA	NVA	7.8	280	NVA	2					7.8
Zinc					120	190					120
2,4-Dinitrotoluene								1.28			1.28
2,6-Dinitrotoluene								0.0328			0.0328
2-Amino-4,6-Dinitrotoluene								NVA	NVA	80	80
4-Amino-2,6-Dinitrotoluene								NVA	NVA	80	80
m-Dinitrobenzene								0.655			0.655
HMX								NVA	NVA		NVA
Nitrobenzene					40	NVA					40
RDX										100	100
Sym-Trinitrobenzene								0.376			0.376
2,4,6-Trinitrotoluene								NVA	NVA	30	30
1,2,3,4-Tetrachlorobenzene					10	NVA					10
1,2,4,5-Tetrachlorobenzene					10	NVA					10
Aldrin								0.00332			0.00332
Aroclor-1016					NVA	40	0.371				40

Table 6-14
Selection of Ecological Soil Screening Toxicity Values for Detected Constituents at LHAAP

	Ecological Soil Screening Levels (2005) [a]				TCEQ Benchmarks (2005) [b]		Proposed Benchmarks				
	Plants (mg/kg)	Inverts. (mg/kg)	Birds (mg/kg)	Mammals (mg/kg)	Earthworms (mg/kg)	Plants (mg/kg)	Ecological PRGs Efroymson (1997) [c] (mg/kg)	Region 5 ESLs (2003) [d] (mg/kg)	Region 4 Screening Values (2001) [e] (mg/kg)	Talmage et al. (1999) [f] (mg/kg)	Final Ecological Screening Value Soil (mg/kg)
Aroclor-1221					NVA	40	0.371				40
Aroclor-1232					NVA	40	0.371				40
Aroclor-1242					NVA	40	0.371				40
Aroclor-1248					NVA	40	0.371				40
Aroclor-1254					NVA	40	0.371				40
Aroclor-1260					NVA	40	0.371				40
Aroclor-1268					NVA	40					40
alpha-BHC								0.0994			0.0994
Chlordane								0.224			0.224
alpha-Chlordane								0.224			0.224
gamma-Chlordane								0.224			0.224
cis-Nonachlor								0.224			0.224
4,4'-DDD								0.758			0.758
4,4'-DDE								0.596			0.596
4,4'-DDT								0.0035			0.0035
Dieldrin	NVA	NVA	0.0069	0.000032							0.000032
Endosulfan sulfate								0.0358			0.0358
Endosulfan II								0.119			0.119
Endrin								0.0101			0.0101
Heptachlor								0.00598			0.00598
Heptachlor epoxide								0.152			0.152
Lindane								0.005			0.005
Mirex											NVA
o,p'-DDD								0.758			0.758
o,p'-DDE								0.596			0.596
o,p'-DDT								0.0035			0.0035
Oxychlordane								0.224			0.224
Penta-chloroanisole											NVA
Silvex (2,4,5-TP)								0.109			0.109
Trans-nonachlor								0.224			0.224
Acetone								2.5			2.5
Benzene								0.255			0.255
Bromodichloromethane								0.54			0.54
2-Butanone								89.6			89.6
Carbon disulfide								0.0941			0.0941
Chlorobenzene					40	NVA					40
Chloroform								1.19			1.19
1,1-Dichloroethane								20.1			20.1
1,2-Dichloroethane								21.2			21.2
1,1-Dichloroethene								8.28			8.28
1,2-Dichloroethene								0.784			0.784
cis-1,2-Dichloroethene								0.784			0.784
Dichlorodifluoromethane								39.5			39.5
trans-1,3-Dichloropropene								0.398			0.398
Ethylbenzene								5.16			5.16
2-Hexanone								12.6			12.6
p-Isopropyltoluene (p-cymene)								NVA	NVA		NVA
Methylene chloride								4.05			4.05

Table 6-14
Selection of Ecological Soil Screening Toxicity Values for Detected Constituents at LHAAP

	Ecological Soil Screening Levels (2005) [a]				TCEQ Benchmarks (2005) [b]		Proposed Benchmarks				
	Plants (mg/kg)	Inverts. (mg/kg)	Birds (mg/kg)	Mammals (mg/kg)	Earthworms (mg/kg)	Plants (mg/kg)	Ecological PRGs Efroymson (1997) [c] (mg/kg)	Region 5 ESLs (2003) [d] (mg/kg)	Region 4 Screening Values (2001) [e] (mg/kg)	Talmage et al. (1999) [f] (mg/kg)	Final Ecological Screening Value Soil (mg/kg)
Styrene					NVA	300	300				300
Tetrachloroethene								9.92			9.92
Toluene					NVA	200	200				200
1,1,1-Trichloroethane								29.8			29.8
Trichloroethene								12.4			12.4
Trichlorofluoromethane								16.4			16.4
Vinyl chloride								0.646			0.646
Xylenes								10			10
Acrolein								5.27			5.27
4-aminobiphenyl											NVA
Aniline								0.0568			0.0568
Benzoic acid								NVA	NVA		NVA
bis(2-ethylhexyl)phthalate								0.925			0.925
Butylbenzyl phthalate								0.239			0.239
4-Chloro-3-methylphenol											NVA
1,3-Dichlorobenzene								37.7			37.7
Diethyl phthalate					NVA	100		24.8			100
Dimethyl phthalate					200	NVA		734			200
Di-n-butyl phthalate					NVA	200					200
Di-n-octyl phthalate								709			709
Dioxins							3.15E-06				0.00000315
Ethyl methanesulfonate											NVA
Furans					NVA	600					600
Hexachlorobenzene								0.199			0.199
Hexachloroethane								0.596	0.596		0.596
1-Methylethyl benzene (Cumene)								NVA	NVA		NVA
3-Methylphenol								3.49			3.49
4-Methylphenol								163			163
1-Naphthylamine								9.34			9.34
4-Nitrophenol					7	NVA					7
Pentachlorophenol	5	31	0.0018	0.0037	31	5					0.0018
Phenol							30	120			30
2-Picoline								9.9			9.9
Acenapthene					NVA	20					20
Acenaphthylene								682			682
Acetophenone								300			300
Anthracene								1480			1480
Benzo(a)anthracene								5.21			5.21
Benzo(a)pyrene								1.52			1.52
Benzo(b)fluoranthene								59.8			59.8
Benzo(k)fluoranthene								148			148
Benzo(g,h,i)perylene								119			119
Carbazole								NVA	NVA		NVA
Chrysene								4.73			4.73
Dibenzo(a,h)anthracene								18.4			18.4
Dibenzofuran								NVA	NVA		NVA
Fluoranthene								122			122

Table 6-14
Selection of Ecological Soil Screening Toxicity Values for Detected Constituents at LHAAP

	Ecological Soil Screening Levels (2005) [a]				TCEQ Benchmarks (2005) [b]		Proposed Benchmarks				Final Ecological Screening Value
	Plants (mg/kg)	Inverts. (mg/kg)	Birds (mg/kg)	Mammals (mg/kg)	Earthworms (mg/kg)	Plants (mg/kg)	Ecological PRGs Efroymson (1997) [c] (mg/kg)	Region 5 ESLs (2003) [d] (mg/kg)	Region 4 Screening Values (2001) [e] (mg/kg)	Talmage et al. (1999) [f] (mg/kg)	Soil (mg/kg)
Fluorene					30	NVA					30
Indeno(1,2,3-cd)pyrene								109			109
2-Methylnaphthalene								3.24			3.24
Naphthalene								0.0994			0.0994
Phenanthrene								45.7			45.7
Pyrene								78.5			78.5

Priority of benchmarks: 1) Eco-SSL, 2) TCEQ, 3) Lower of Efroymson, 1997 and Region 5 ESL, 4)Others (Dutch Intervention Values, Region 4, etc.)

NVA: No value available

Bold numbers indicate ecological screening values selected for Longhorn

[a] U.S. Environmental Protection Agency (EPA), 2005, *Guidance for Developing Ecological Soil Screening Levels (Eco-SSL)*, Office of Solid Waste and Emergency Response, Website version last updated March 15, 2005: http://www.epa.gov/ecotox/ecossl.

[b] Texas Commission on Environmental Quality (TCEQ), 2005, *Guidance for Conducting Ecological Risk Assessments at Remediation Sites in Texas*, RG-263 (Revised).

[c] Efroymson, R.A., Suter II, G.W., Sample, B.E. and Jones, D.S., 1997. Preliminary Remediation Goals for Ecological Endpoints. Lockheed Martin Energy Systems, Inc. ES/ER/TM-162/R2.

[d] U.S. Environmental Protection Agency (EPA), 2003, *U.S. EPA Region 5 RCRA Ecological Screening Levels (ESL)*, Website version last updated August 22, 2003: http://www.epa.gov/reg5rcra/ca/edql.htm.

[e] U.S. Environmental Protection Agency (EPA), 2001, *Supplemental Guidance to RAGS: Region 4 Bulletins, Ecological Risk Assessment*. Originally published November 1995. Website version last updated November 30, 2001: http://www.epa.gov/region4/waste/ots/ecolbul.htm.

[f] Talmage, S.S., D.M. Opresko, C.J. Maxwell, C.J.E. Welsh, F.M. Cretella, P.H. Reno, and F.B. Daniel, 1999, Nitroaromatic Munition Compounds: Environmental Effects and Screening Values; Rev. Environ. Contam. Toxicol. 161:1-156, Springer-Verlag. Screening concentration used is the lowest of the Plant and Soil Invertebrate concentrations. Wildlife (shrew) values were not included as candidates for screening values. This is consistent with TCEQ's method of only using the Plant and Earthworm values to select their screening values.

[g] Earthworm and plant soil benchmark values in TCEQ 2005 were transposed, the values were corrected to reflect the Eco-SSLs (2005) *Personal Communication* with Vickie Reat, TCEQ, 12/06/05.

Table 6-15
Selection of Ecological Surface Water Screening Toxicity Values for Detected Constituents at LHAAP

Parameter	Texas Ecological Benchmarks[a] (mg/L)	Ecological Screening Levels[b] (mg/L)	Preliminary Remediation Goals for Ecological Endpoints[c] (mg/L)	Environmental Quality Guidelines[d] (mg/L)	Ecological Benchmark Screening Values[e] (mg/L)	Other Screening Values[f] (mg/L)	Selected Ecological Screening Toxicity Value[g] (mg/L)
Aluminum	8.70E-02	---	---	---	---	---	8.70E-02
Antimony	1.60E-01	---	---	---	---	---	1.60E-01
Arsenic	1.90E-01	---	---	---	---	---	1.90E-01
Barium	1.60E+01	---	---	---	---	---	1.60E+01
Beryllium	5.30E-03	---	---	---	---	---	5.30E-03
Cadmium	6.00E-04	---	---	---	---	---	6.00E-04
Calcium	NVA	NVA	NVA	NVA	1.16E+02	---	1.16E+02
Chromium (Cr-VI)	1.06E-02	---	---	---	---	---	1.06E-02
Cobalt	1.50E+00	---	---	---	---	---	1.50E+00
Copper	7.00E-03	---	---	---	---	---	7.00E-03
Cyanide	1.07E-02	---	---	---	---	---	1.07E-02
Iron	1.00E+00	---	---	---	---	---	1.00E+00
Lead	1.00E-03	---	---	---	---	---	1.00E-03
Magnesium	3.23E+00	---	---	---	---	---	3.23E+00
Manganese	1.20E-01	---	---	---	---	---	1.20E-01
Mercury	1.30E-03	---	---	---	---	---	1.30E-03
Nickel	8.74E-02	---	---	---	---	---	8.74E-02
Perchlorate	NVA	NVA	NVA	NVA	NVA	4.00E-01	4.00E-01
Potassium	NVA	NVA	NVA	NVA	5.30E+01	---	5.30E+01
Selenium	5.00E-03	---	---	---	---	---	5.00E-03
Silver (free ion)	8.00E-05	---	---	---	---	---	8.00E-05
Sodium	NVA	NVA	NVA	NVA	6.80E+02	---	6.80E+02
Strontium	1.50E+00	---	---	---	---	---	1.50E+00
Sulfate	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Thallium	4.00E-03	---	---	---	---	---	4.00E-03
Tin	7.30E-02	---	---	---	---	---	7.30E-02
Vanadium	2.00E-02	---	---	---	---	---	2.00E-02
Zinc	5.81E-02	---	---	---	---	---	5.81E-02
2,4-Dinitrotoluene	1.22E+00	---	---	---	---	---	1.22E+00
2,6-Dinitrotoluene (2,4-DNT as surrogate)	1.22E+00	---	---	---	---	---	1.22E+00
2-Amino,4,6-Dinitrotoluene	7.40E-01	---	---	---	---	---	7.40E-01
4-Amino-2,6-Dinitrotoluene (2-Amino,2,6-DNT as surrogate)	7.40E-01	---	---	---	---	---	7.40E-01
2,4,6-Trinitrotoluene	5.00E-02	---	---	---	---	---	5.00E-02
Acetone	1.01E+02	---	---	---	---	---	1.01E+02
Bromodichloromethane	2.16E+00	---	---	---	---	---	2.16E+00
2-Butanone	4.24E+01	---	---	---	---	---	4.24E+01
Carbon disulfide	1.05E-01	---	---	---	---	---	1.05E-01

Table 6-15
Selection of Ecological Surface Water Screening Toxicity Values for Detected Constituents at LHAAP

Parameter	Texas Ecological Benchmarks[a] (mg/L)	Ecological Screening Levels[b] (mg/L)	Preliminary Remediation Goals for Ecological Endpoints[c] (mg/L)	Environmental Quality Guidelines[d] (mg/L)	Ecological Benchmark Screening Values[e] (mg/L)	Other Screening Values[f] (mg/L)	Selected Ecological Screening Toxicity Value[g] (mg/L)
1,2-Dichloroethane	6.30E+00	---	---	---	---	---	6.30E+00
1,1-Dichloroethene	1.50E+00	---	---	---	---	---	1.50E+00
cis-1,2-Dichloroethene	1.40E+01	---	---	---	---	---	1.40E+01
Ethylbenzene	1.09E+00	---	---	---	---	---	1.09E+00
p-Isopropyltoluene (p-cymene)	4.20E-02	---	---	---	---	---	4.20E-02
Toluene	1.45E+00	---	---	---	---	---	1.45E+00
Trichloroethene	5.50E-01	---	---	---	---	---	5.50E-01
Trichlorofluoromethane	8.71E-01	---	---	---	---	---	8.71E-01
Vinyl chloride	2.82E+00	---	---	---	---	---	2.82E+00
Acrolein	1.40E-03	---	---	---	---	---	1.40E-03
bis(2-ethylhexyl)phthalate	3.00E-01	---	---	---	---	---	3.00E-01
Di-n-butyl phthalate	7.00E-03	---	---	---	---	---	7.00E-03
Dioxins (2,3,7,8-TCDD as surrogate)	NVA	3.00E-12	NVA	NVA	---	---	3.00E-12
Dioxins (PCDD as surrogate)	NVA	2.78E-10	NVA	NVA	---	---	2.78E-10
Furans	NVA	NVA	NVA	NVA	1.00E-08	---	1.00E-08
3-Methylphenol (4-Methylphenol as surrogate)	2.72E-01	---	---	---	---	---	2.72E-01
4-Methylphenol	2.72E-01	---	---	---	---	---	2.72E-01
Phenol	1.10E-01	---	---	---	---	---	1.10E-01

Acenaphthylene	NVA	4.84E+00	NVA	NVA	---	---	4.84E+00
Anthracene	3.00E-04	---	---	---	---	---	3.00E-04
Benzo(a)anthracene	3.46E-02	---	---	---	---	---	3.46E-02
Benzo(a)pyrene	1.40E-05	---	---	---	---	---	1.40E-05
Benzo(b)fluoranthene	NVA	9.07E-03	NVA	NVA	---	---	9.07E-03
Benzo(k)fluoranthene (Benzo[b]fluoranthene as surrogate)	NVA	9.07E-03	NVA	NVA	---	---	9.07E-03
Benzo(g,h,i)perylene	NVA	7.64E-03	NVA	NVA	---	---	7.64E-03
Chrysene	7.00E-03	---	---	---	---	---	7.00E-03
Dibenzo(a,h)anthracene	5.00E-03	---	---	---	---	---	5.00E-03
Dibenzofuran	9.40E-02	---	---	---	---	---	9.40E-02
Fluoranthene	6.16E-03	---	---	---	---	---	6.16E-03
Fluorene	1.10E-02	---	---	---	---	---	1.10E-02
Naphthalene	2.50E-01	---	---	---	---	---	2.50E-01
Phenanthrene	3.00E-02	---	---	---	---	---	3.00E-02
Pyrene	7.00E-03	---	---	---	---	---	7.00E-03
Methylene chloride	1.10E+01	---	---	---	---	---	1.10E+01
1,3-Dinitrobenzene	7.20E-02	---	---	---	---	---	7.20E-02
trans-1,2-dichloroethene	2.20E+01	---	---	---	---	---	2.20E+01
1,2,4-Trichlorobenzene	5.10E-02	---	---	---	---	---	5.10E-02

Table 6-15
Selection of Ecological Surface Water Screening Toxicity Values for Detected Constituents at LHAAP

Parameter	Texas Ecological Benchmarks[a] (mg/L)	Ecological Screening Levels[b] (mg/L)	Preliminary Remediation Goals for Ecological Endpoints[c] (mg/L)	Environmental Quality Guidelines[d] (mg/L)	Ecological Benchmark Screening Values[e] (mg/L)	Other Screening Values[f] (mg/L)	Selected Ecological Screening Toxicity Value[g] (mg/L)
1,4-Dichlorobenzene	1.10E-01	---	---	---	---	---	1.10E-01
Hexachlorobutadiene	9.30E-04	---	---	---	---	---	9.30E-04
Chloromethane	2.80E+01	---	---	---	---	---	2.80E+01
Styrene	1.25E+00	---	---	---	---	---	1.25E+00
Tetrachloroethene	7.90E-01	---	---	---	---	---	7.90E-01
Chloride	2.30E+02	---	---	---	---	---	2.30E+02
HMX	1.50E-01	---	---	---	---	---	1.50E-01
Diethyl phthalate	1.04E+00	---	---	---	---	---	1.04E+00
Dibromochloromethane	1.29E-01	---	---	---	---	---	1.29E-01
Tetryl	NVA	NVA	NVA	NVA	NVA	5.80E+00	5.80E+00
1,3,5-Trinitrobenzene	NVA	NVA	NVA	NVA	1.10E-02	---	1.10E-02
Nitrate/Nitrite	NVA	NVA	NVA	6.00E-02	---	---	6.00E-02
2-Nitrotoluene	4.40E-01	---	---	---	---	---	4.40E-01
4-Nitrotoluene	9.50E-01	---	---	---	---	---	9.50E-01
RDX	1.80E-01	---	---	---	---	---	1.80E-01
Chloroform	8.90E-01	---	---	---	---	---	8.90E-01
Chlorobromomethane	NVA	NVA	NVA	NVA	1.10E+01	---	1.10E+01

[a] Texas Commission on Environmental Quality (TCEQ), 2005, Guidance for Conducting Ecological Risk Assessments at Remediation Sites in Texas, RG-263 (Revised).

[b] Ecological Screening Levels (ESLs), U.S.EPA Region V, August 2003.

[c] Preliminary Remediation Goals (PRGs), ORNL, ES/ER/TM-162/R2, Efroymson, R.A., et al., 1997.

[d] Canadian Environmental Quality Guidelines (EQGs), CCME, 2002.

[e] Ecological Benchmark Screening Values for Surface Water, USEPA Region IV, 2000.

[f] Talmage et al., 1999, LANL, Los Alamos National Laboratory Eco Risk database, 2002, or Appendix J-1 for perchlorate.

[g] The following hierarchy was used to select the final ecological screening toxicity value:
(1) TCEQ value; (2) Lower of Region V ESL, ORNL PRG, and Canadian EQG values; (3) Region IV Screening value; (4) Other available screening values.

NVA = No Value Available

Table 6-16
Selection of Ecological Sediment Screening Toxicity Values for Detected Constituents at LHAAP

Parameter	Texas Ecological Benchmarks[a] (mg/kg)	Ecological Screening Levels[b] (mg/kg)	Preliminary Remediation Goals for Ecological Endpoints[c] (mg/kg)	Interim Sediment Quality Guidelines[d] (mg/kg)	Ecological Benchmark Screening Value[e] (mg/kg)	LANL Ecological Screening Levels[f] (mg/kg)	Selected Ecological Screening Toxicity Value[g] (mg/kg)
Aluminum	NVA	NVA	NVA	NVA	NVA	2.80E+02	**2.80E+02**
Antimony	2.00E+00	---	---	---	---	---	2.00E+00
Arsenic	9.79E+00	---	---	---	---	---	**9.79E+00**
Barium	NVA	NVA	NVA	NVA	NVA	4.80E+01	**4.80E+01**
Beryllium	NVA	NVA	NVA	NVA	NVA	7.30E+01	**7.30E+01**
Cadmium	9.90E-01	---	---	---	---	---	**9.90E-01**
Calcium	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Chromium	4.34E+01	---	---	---	---	---	**4.34E+01**
Cobalt	5.00E+01	---	---	---	---	---	**5.00E+01**
Copper	3.16E+01	---	---	---	---	---	**3.16E+01**
Cyanide	NVA	1.00E-01	NVA	NVA	---	---	**1.00E-01**
Iron	2.00E+04	---	---	---	---	---	2.00E+04
Lead	3.58E+01	---	---	---	---	---	**3.58E+01**
Magnesium	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Manganese	4.60E+02	---	---	---	---	---	4.60E+02
Mercury	1.80E-01	---	---	---	---	---	**1.80E-01**
Nickel	2.27E+01	---	---	---	---	---	**2.27E+01**
Perchlorate	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Potassium	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Selenium	NVA	NVA	NVA	NVA	NVA	1.00E+00	1.00E+00
Silver	1.00E+00	---	---	---	---	---	1.00E+00
Sodium	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Strontium	NVA	NVA	NVA	NVA	NVA	1.70E+03	**1.70E+03**
Sulfate	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Thallium	NVA	NVA	NVA	NVA	NVA	4.40E-02	4.40E-02
Vanadium	NVA	NVA	NVA	NVA	NVA	3.00E+01	**3.00E+01**
Zinc	1.21E+02	---	---	---	---	---	**1.21E+02**
Acetone	6.00E+01	---	---	---	---	---	**6.00E+01**
Bromodichloromethane	2.46E+00	---	---	---	---	---	**2.46E+00**
2-Butanone (MEK)	2.57E+01	---	---	---	---	---	**2.57E+01**
Carbon disulfide	1.20E-01	---	---	---	---	---	**1.20E-01**
1,2-Dichloroethane	4.79E+00	---	---	---	---	---	**4.79E+00**
1,1-Dichloroethene	1.87E+00	---	---	---	---	---	**1.87E+00**
cis-1,2-Dichloroethene	NVA	NVA	4.00E-01	NVA	---	---	4.00E-01
Ethylbenzene	2.86E+00	---	---	---	---	---	**2.86E+00**
p-Isopropyltoluene (p-cymene)	1.00E+00	---	---	---	---	---	**1.00E+00**
Toluene	2.88E+00	---	---	---	---	---	**2.88E+00**
Trichloroethene	8.40E-01	---	---	---	---	---	**8.40E-01**
Trichlorofluoromethane	1.69E+00	---	---	---	---	---	**1.69E+00**
Vinyl chloride	1.96E+00	---	---	---	---	---	**1.96E+00**
Acrolein	NVA	1.52E-06	NVA	NVA	---	---	1.52E-06
bis(2-ethylhexyl)phthalate	1.82E-01	---	---	---	---	---	**1.82E-01**
Di-n-butyl phthalate	NVA	NVA	2.40E+02	NVA	---	---	2.40E+02
Dioxins (2,3,7,8-TCDD as surrogate)	NVA	1.20E-07	NVA	8.50E-07	---	---	1.20E-07
Dioxins (PCDD as surrogate)	NVA	1.10E-05	NVA	8.50E-07	---	---	8.50E-07

Table 6-16
Selection of Ecological Sediment Screening Toxicity Values for Detected Constituents at LHAAP

Parameter	Texas Ecological Benchmarks[a] (mg/kg)	Ecological Screening Levels[b] (mg/kg)	Preliminary Remediation Goals for Ecological Endpoints[c] (mg/kg)	Interim Sediment Quality Guidelines[d] (mg/kg)	Ecological Benchmark Screening Value[e] (mg/kg)	LANL Ecological Screening Levels[f] (mg/kg)	Selected Ecological Screening Toxicity Value[g] (mg/kg)
Furans	NVA	NVA	NVA	8.50E-07	---	---	8.50E-07
3-Methylphenol	NVA	5.24E-02	NVA	NVA	---	---	5.24E-02
4-Methylphenol	NVA	2.02E-02	NVA	NVA	---	---	2.02E-02
Phenol	NVA	4.91E-02	3.20E-02	NVA	---	---	3.20E-02
Isobutanol	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Isopropyl benzene (Cumene)	8.99E+00	---	---	---	---	---	**8.99E+00**
Nitrate	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Butyl benzyl phthalate	NVA	1.97E+00	NVA	NVA	---	---	1.97E+00
Methylene chloride	7.75E+00	---	---	---	---	---	**7.75E+00**
Dieldrin	1.90E-03	---	---	---	---	---	**1.90E-03**
4,4'-DDD	4.88E-03	---	---	---	---	---	**4.88E-03**
4,4'-DDT	4.16E-03	---	---	---	---	---	**4.16E-03**
Aroclor 1254	6.00E-02	---	---	---	---	---	6.00E-02
Styrene	1.02E+01	---	---	---	---	---	**1.02E+01**
Chlorobenzene	1.70E-01	---	---	---	---	---	**1.70E-01**
Chloride	NVA	NVA	NVA	NVA	NVA	NVA	NVA
2,6-Dinitrotoluene	NVA	3.98E-02	NVA	NVA	---	---	3.98E-02
2,4,6-TNT	NVA	NVA	NVA	NVA	9.20E-02	4.20E+02	9.20E-02
2-Amino-4,6,-Dintrotoluene	NVA	NVA	NVA	NVA	NVA	7.00E+00	**7.00E+00**
4-Amino-2,6,-Dintrotoluene	NVA	NVA	NVA	NVA	NVA	1.40E+00	**1.40E+00**
Acenaphthylene	5.90E-03	---	---	---	---	---	**5.90E-03**
Anthracene	5.72E-02	---	---	---	---	---	**5.72E-02**
Benzo(a)anthracene	1.08E-01	---	---	---	---	---	**1.08E-01**
Benzo(a)pyrene	1.50E-01	---	---	---	---	---	**1.50E-01**
Benzo(b)fluoranthene	NVA	1.04E+01	4.00E+00	NVA	---	---	4.00E+00
Benzo(k)fluoranthene	NVA	2.40E-01	4.00E+00	NVA	---	---	2.40E-01
Benzo(g,h,i)perylene	NVA	1.70E-01	6.30E+00	NVA	---	---	1.70E-01
Chrysene	1.66E-01	---	---	---	---	---	**1.66E-01**
Dibenzo(a,h)anthracene	3.30E-02	---	---	---	---	---	3.30E-02
Dibenzofuran	NVA	4.49E-01	4.20E-01	NVA	---	---	4.20E-01
Fluoranthene	4.23E-01	---	---	---	---	---	**4.23E-01**
Fluorene	7.74E-02	---	---	---	---	---	7.74E-02
Naphthalene	1.76E-01	---	---	---	---	---	1.76E-01
Phenanthrene	2.04E-01	---	---	---	---	---	**2.04E-01**
Pyrene	1.95E-01	---	---	---	---	---	**1.95E-01**

Notes:

a Guidance for Conducting Ecological Risk Assessments at Remediation Sites in Texas, TCEQ, September 2005.

b Ecological Screening Levels (ESLs), U.S.EPA Region V, August 2003.

c Preliminary Remediation Goals (PRGs), ORNL, ES/ER/TM-162/R2, Efroymson, R.A., et al., 1997.

d Canadian Interim Sediment Quality Guidelines (ISQGs) Summary Table, CCME, December 2003.

e Ecological Benchmark Screeing Values for Sediment, USEPA Region IV, 2000.

f Ecological Screening Levels (ESLs) for Los Alamos National Laboratory (LANL), 2005.

g The following hierarchy was used to select the final ecological screening toxicity value:
(1) TCEQ value; (2) Lower of Region V ESL, ORNL PRG, and Canadian ISQG values; (3) Region IV Screening value; (4) LANL ESL value

NVA no value available

Table 6-17
Selection of Constituents of Potential Ecological Concern
Total Soil [a]
Industrial Sub-Area

Chemical	Detection Frequency	Percent Hits	Range of Values, mg/kg: Detected Concentrations Minimum - Maximum	Range of Values, mg/kg: Reporting Limits Minimum - Maximum	Statistical Distribution [b]	Mean mg/kg	95% UCL mg/kg [c]		Screening Concentration mg/kg [d]	ESV mg/kg [e]	HQ_{SCREEN}	TCEQ Bioaccumulative Compound?	COPEC? [f,g]	
Inorganics														
Aluminum	522 / 540	97	54.6 - 40400	1.01 - 22200	L	8.99E+03	9.54E+03		9.54E+03	NSV	---		Yes	
Antimony	60 / 570	11	0.259 - 16.2	0.12 - 60	L	2.05E+00	2.10E+00		2.10E+00	0.27	7.80		Yes	
Arsenic	621 / 654	95	0.2 - 187.9	0.1 - 5	L	4.19E+00	4.71E+00		4.71E+00	18	0.26		No (a)	
Barium	603 / 654	92	9.35 - 1960	0.201 - 1430	L	1.17E+02	1.27E+02		1.27E+02	330	0.39		No (a)	
Beryllium	169 / 205	82	0.0469 - 2.15	0.0204 - 1.17	L	6.16E-01	6.55E-01		6.55E-01	21	0.031		No (a)	
Cadmium	134 / 654	20	0.1 - 37.5	0.1 - 10	L	7.47E-01	8.87E-01		8.87E-01	0.36	2.46	Yes	Yes	
Calcium	479 / 487	98	5.6 - 295000	6.1 - 11900	L	3.71E+03	4.45E+03		4.45E+03	Nutrient	---		No (b)	
Chloride	58 / 161	36	2.9 - 3503.625	2.1 - 1007.25	L	7.35E+01	1.04E+02		1.04E+02	Nutrient	---		No (b)	
Chromium	630 / 655	96	1.3 - 193.7	0.506 - 26.4	L	1.76E+01	1.88E+01		1.88E+01	0.4	46.90	Yes	Yes	
Cobalt	415 / 488	85	0.701 - 187.65	0.52 - 12	L	6.82E+00	7.54E+00		7.54E+00	13	0.58		No (a)	
Copper	496 / 543	91	0.761 - 1460	0.5 - 10	L	1.33E+01	1.76E+01		1.76E+01	61	0.29	Yes	Yes	*
Cyanide, Total	1 / 30	3	1.3 - 1.3	0.44 - 1.175	NP	3.13E-01	3.98E-01		3.98E-01	5	0.08		No (a)	
Iron	521 / 540	96	844 - 120000	1.9 - 35000	L	1.64E+04	1.74E+04		1.74E+04	200	86.9		Yes	
Lead	645 / 653	99	1 - 1740	0.2 - 68	L	3.99E+01	4.75E+01		4.75E+01	11	4.32	Yes	Yes	*
Magnesium	519 / 540	96	44.1 - 6730	5.06 - 1290	L	9.53E+02	1.02E+03		1.02E+03	Nutrient	---		No (b)	
Manganese	537 / 538	99.8	8.3 - 3740	0.59 - 23	L	2.97E+02	3.23E+02		3.23E+02	500	0.65		No (a)	
Mercury	144 / 654	22	0.015 - 104.6	0.01 - 7.08	L	2.65E-01	5.89E-01		5.89E-01	0.1	5.9	Yes	Yes	
Molybdenum	2 / 61	3	0.53 - 0.568	0.506 - 7.1	L	3.34E-01	4.27E-01	(i)	4.27E-01	2	0.21		No (a)	
Nickel	310 / 337	92	1.2 - 54.8	0.506 - 9.4	L	9.95E+00	1.07E+01		1.07E+01	30	0.36	Yes	Yes	*
Potassium	471 / 488	97	58.2 - 2590	5.43 - 1200	L	5.67E+02	5.94E+02		5.94E+02	Nutrient	---		No (b)	
Selenium	244 / 654	37	0.075 - 185.195	0.1 - 14	L	1.17E+00	1.50E+00		1.50E+00	1	1.50	Yes	Yes	
Silver	59 / 653	9	0.021 - 109	0.016 - 10	L	6.69E-01	9.56E-01		9.56E-01	2	0.48		No (a)	
Sodium	44 / 142	31	58.7 - 2100	52 - 1200	L	2.36E+02	2.69E+02		2.69E+02	Nutrient	---		No (b)	
Strontium	450 / 532	85	1.4 - 7130	0.5 - 890	L	3.84E+01	5.39E+01		5.39E+01	NSV	---		Yes	
Thallium	9 / 356	3	1.05 - 1.71	0.13 - 51.9	L	4.52E-01	4.82E-01	(i)	4.82E-01	1	0.48		No (a)	
Vanadium	205 / 205	100	5.26 - 75.9	0.5 - 12	L	2.48E+01	2.60E+01		2.60E+01	7.8	3.33		Yes	
Zinc	539 / 543	99	2.02 - 2580	0.55 - 24	L	5.34E+01	6.16E+01		6.16E+01	120	0.51	Yes	Yes	*
General Chemistry														
Nitrate	38 / 93	41	0.1325 - 51.5	0.055 - 4.3	L	1.21E+00	1.86E+00		1.86E+00	NSV	---		Yes	
Sulfate	75 / 161	47	3.6 - 5400	2.2 - 300	L	9.41E+01	1.35E+02		1.35E+02	NSV	---		Yes	
Perchlorate											---			
Perchlorate	83 / 278	30	0.014 - 163	0.00525 - 75.7	L	2.93E+00	3.79E+00		3.79E+00	NSV	---		Yes	
Nitroaromatics														
1,3,5-Trinitrobenzene	3 / 277	1	0.43 - 28.5	0.00025 - 2.6	L	3.12E-01	4.13E-01		4.13E-01	0.376	1.10		No (c)	
1,3-Dinitrobenzene	1 / 270	0.4	0.83 - 0.83	0.00025 - 1.2	L	1.19E-01	1.18E-01		1.18E-01	0.655	0.18		No (a)	
2,4,6-Trinitrotoluene	7 / 277	3	3.6 - 57000	0.00025 - 160	L	2.07E+02	4.12E+02		4.12E+02	30	13.75		No (c)	
2,4-Dinitrotoluene [h]	4 / 568	1	0.42 - 6.2	0.00025 - 3.3	L	1.93E-01	2.17E-01		2.17E-01	1.28	0.17		No (a)	
2-Amino-4,6-dinitrotoluene	2 / 162	1	2.6 - 15	0.05 - 1.3	L	2.54E-01	3.59E-01		3.59E-01	80	0.0045		No (a)	
4-Amino-2,6-dinitrotoluene	2 / 233	1	1.1 - 12	0.05 - 1.3	L	2.42E-01	2.72E-01		2.72E-01	80	0.0034		No (a)	
Nitrobenzene [h]	1 / 568	0.2	1.1 - 1.1	0.00026 - 3.3	L	1.56E-01	1.62E-01		1.62E-01	40	0.00405		No (a)	
Dioxins/Furans														
2,3,7,8-TCDD TEQ	89 / 90	99	2.71215E-07 - 9.3353E-05	NA - NA	L	5.82E-06	7.62E-06		7.62E-06	0.00000315	2.4	Yes	Yes	
Polychlorinated Biphenyls (PCBs)														
Aroclor 1242	20 / 149	13	0.00163 - 0.0205	0.00129 - 0.39	L	6.31E-03	7.40E-03	(i)	7.40E-03	40	0.000185	Yes	Yes	*
Aroclor 1248	7 / 149	4.7	0.0012125 - 0.00402	0.00129 - 0.39	L	1.11E-03	1.32E-03	(i)	1.32E-03	40	0.000033	Yes	Yes	*
Aroclor 1254	30 / 149	20	0.0014525 - 1.3	0.00129 - 0.39	L	3.78E-02	5.39E-02		5.39E-02	40	0.00135	Yes	Yes	*
Aroclor 1260	29 / 149	19	0.00169 - 0.179	0.00129 - 0.39	L	1.70E-02	1.93E-02	(i)	1.93E-02	40	0.00048	Yes	Yes	*
Organochlorine Pesticides														
1,2,3,4-Tetrachlorobenzene	2 / 52	4	0.000204 - 0.00101	0.000152 - 0.000405	L	1.75E-04	1.86E-04		1.86E-04	10	0.00002		No (a)	
1,2,4,5-Tetrachlorobenzene [h]	25 / 52	48	0.00023725 - 0.00532	0.000152 - 0.000405	L	7.19E-04	9.87E-04		9.87E-04	10	0.00010		No (a)	
2,4,5-TP	1 / 36	3	0.0171975 - 0.0171975	0.00087 - 0.2	NP	7.39E-03	2.26E-03		2.26E-03	0.109	0.02		No (a)	
4,4'-DDD	11 / 170	6	0.0002455 - 0.02485	0.000152 - 0.195	L	1.64E-03	1.88E-03	(i)	1.88E-03	0.758	0.0025	Yes	Yes	*
4,4'-DDE	59 / 170	35	0.000328 - 0.6175	0.000152 - 0.071	L	1.20E-02	1.72E-02		1.72E-02	0.596	0.0289	Yes	Yes	*
4,4'-DDT	37 / 170	22	0.000191 - 0.185	0.000152 - 0.213	L	5.57E-03	6.89E-03		6.89E-03	0.0035	1.97	Yes	Yes	
Aldrin	8 / 170	4.7	0.000266 - 0.085475	0.000152 - 0.071	L	1.76E-03	2.82E-03		2.82E-03	0.00332	0.85	Yes	Yes	*
alpha-BHC	1 / 170	1	0.01 - 0.01	0.000152 - 0.053	L	1.18E-03	9.38E-04		9.38E-04	0.0994	0.01		No (a)	

Table 6-17
Selection of Constituents of Potential Ecological Concern
Total Soil [a]
Industrial Sub-Area

Chemical	Detection Frequency	Percent Hits	Range of Values, mg/kg: Detected Concentrations Minimum - Maximum	Range of Values, mg/kg: Reporting Limits Minimum - Maximum	Statistical Distribution [b]	Mean mg/kg	95% UCL mg/kg [c]		Screening Concentration mg/kg [d]	ESV mg/kg [e]	HQ_{SCREEN}	TCEQ Bioaccumulative Compound?	COPEC? [f,g]	
alpha-Chlordane	16 / 71	23	0.000215 - 0.047	0.000152 - 0.0039	L	1.34E-03	2.60E-03		2.60E-03	0.224	0.01	Yes	Yes	*
Chlordane	1 / 161	1	0.00135 - 0.00135	0.000152 - 0.249	L	1.60E-04	1.83E-04	(i)	1.83E-04	0.224	0.001	Yes	Yes	*
cis-Nonachlor	5 / 52	10	0.000324 - 0.00338	0.000152 - 0.000405	L	2.70E-04	3.91E-04		3.91E-04	0.224	0.00	Yes	Yes	*
Dieldrin	3 / 170	2	0.000501 - 0.01155	0.000152 - 0.036	L	1.51E-03	1.70E-03	(i)	1.70E-03	0.000032	53	Yes	Yes	*
Endosulfan II	4 / 170	2	0.000178 - 0.00695	0.000152 - 0.071	L	1.86E-03	1.54E-03		1.54E-03	0.119	0.01		No (a)	
Endosulfan Sulfate	1 / 118	1	0.0007 - 0.0007	0.0032 - 1.172	L	1.18E-02	4.44E-04		4.44E-04	0.0358	0.01		No (a)	
Endrin	9 / 170	5.3	0.00021225 - 0.000987	0.000152 - 0.107	L	2.95E-04	4.03E-04	(i)	4.03E-04	0.0101	0.04	Yes	Yes	*
gamma-BHC (Lindane)	2 / 170	1	0.000569 - 0.008	0.000152 - 0.071	L	1.28E-03	5.38E-03		5.38E-03	0.005	1		No (c)	
gamma-Chlordane	1 / 19	5.3	0.03715 - 0.03715	0.0032 - 0.0039	NP	3.61E-03	5.38E-03		5.38E-03	0.224	0.02	Yes	Yes	*
Heptachlor	1 / 170	1	0.000484 - 0.000484	0.000152 - 0.053	L	1.65E-04	1.87E-04	(i)	1.87E-04	0.00598	0.0	Yes	Yes	*
Hexachlorobenzene [h]	2 / 545	0.4	0.000464 - 0.244	0.000152 - 3.9	N	1.48E-02	1.71E-02	(i)	1.71E-02	0.199	0.09	Yes	Yes	*
o,p'-DDD	4 / 48	8	0.000324 - 0.00645	0.000152 - 0.000405	NP	3.03E-04	5.60E-04		5.60E-04	0.758	0.001		No (d)	
o,p'-DDE	5 / 52	10	0.000299 - 0.02385	0.000152 - 0.000405	L	6.52E-04	1.55E-03		1.55E-03	0.596	0.003		No (d)	
o,p'-DDT	9 / 52	17	0.000343 - 0.00366	0.000152 - 0.000405	L	3.32E-04	5.17E-04		5.17E-04	0.0035	0.15		No (d)	
Pentachloroanisole	14 / 52	27	0.000186 - 0.00832	0.000152 - 0.000405	L	5.07E-04	8.77E-04		8.77E-04	NSV	---		Yes	
trans-Nonachlor	6 / 52	12	0.000367 - 0.00417	0.000152 - 0.000405	L	2.72E-04	4.15E-04		4.15E-04	0.224	0.002	Yes	Yes	*
Semivolatile Organics														
1,3-Dichlorobenzene [h]	23 / 546	4	0.02935 - 0.0949	0.0084 - 7.8	L	3.56E-02	4.44E-02	(i)	4.44E-02	37.7	0.001		No (a)	
2,6-Dinitrotoluene [h]	1 / 568	0.2	0.73 - 0.73	0.00026 - 7.8	L	2.36E-01	1.11E-01		1.11E-01	0.0328	3.40		No (c)	
2-Methylnaphthalene	2 / 545	0.4	0.23 - 1.635	0.0261 - 7.8	L	2.06E-01	2.27E-01		2.27E-01	3.24	0.07		No (a)	
2-Picoline	1 / 52	2	0.166 - 0.166	0.0261 - 0.352	L	4.09E-02	4.33E-02		4.33E-02	9.9	0.004		No (a)	
4-Nitrophenol	1 / 513	0.2	0.0357 - 0.0357	0.0261 - 20	L	3.57E-02	3.57E-02	(i)	3.57E-02	7	0.005		No (a)	
Acenaphthene	4 / 565	1	0.13815 - 1.2	0.0261 - 7.8	L	1.99E-01	2.07E-01		2.07E-01	20	0.0103		No (a)	
Acenaphthylene	1 / 565	0.2	0.5 - 0.5	0.0261 - 7.8	L	2.08E-01	2.11E-01		2.11E-01	682	0.0003		No (a)	
Acetophenone	1 / 52	2	0.04245 - 0.04245	0.0261 - 0.352	L	1.52E-02	1.76E-02	(i)	1.76E-02	300	0.00006		No (a)	
Aniline	1 / 52	2	0.0473 - 0.0473	0.0261 - 0.352	L	3.87E-02	4.26E-02		4.26E-02	0.0568	0.75		No (a)	
Anthracene	7 / 565	1	0.0137 - 0.43	0.0261 - 7.8	L	2.08E-01	2.16E-01		2.16E-01	1480	0.00015		No (a)	
Benzo(a)anthracene	19 / 565	3	0.0048 - 2.3	0.017 - 7.8	L	2.01E-01	2.43E-01		2.43E-01	5.21	0.047		No (a)	
Benzo(a)pyrene	16 / 565	3	0.007 - 2.1	0.017 - 3.9	L	1.93E-01	2.08E-01		2.08E-01	1.52	0.14		No (a)	
Benzo(b)fluoranthene	28 / 565	5	0.0111 - 4.7	0.017 - 7.8	L	2.52E-01	2.81E-01		2.81E-01	59.8	0.005		No (a)	
Benzo(ghi)perylene	15 / 565	3	0.0059 - 1.3	0.017 - 7.8	L	2.93E-01	3.44E-01		3.44E-01	119	0.003		No (a)	
Benzo(k)fluoranthene	16 / 565	3	0.008 - 1.2	0.017 - 7.8	L	2.37E-01	2.85E-01		2.85E-01	148	0.002		No (a)	
Benzoic Acid	8 / 448	2	0.0341 - 2.3	0.0261 - 20	L	8.16E-01	8.89E-01		8.89E-01	NSV	---		No (c)	
bis(2-Ethylhexyl)phthalate	109 / 545	20	0.035 - 3	0.0261 - 7.8	L	2.16E-01	2.41E-01	(i)	2.16E-01	0.925	0.23		No (a)	
Butyl benzyl phthalate	8 / 544	1	0.352 - 1.1	0.0261 - 7.8	L	2.22E-01	2.39E-01		2.39E-01	0.239	1.0		No (a)	
Carbazole	1 / 197	1	0.26315 - 0.26315	0.0261 - 7.8	L	3.20E-01	6.96E-02	(i)	6.96E-02	NSV	---		No (c)	
Chrysene	25 / 565	4	0.00695 - 2.6	0.017 - 13.514	L	4.60E-01	5.10E-01		5.10E-01	4.73	0.11		No (a)	
Dibenzo(a,h)anthracene	6 / 565	1	0.0062 - 0.6545	0.017 - 7.8	L	2.90E-01	3.23E-01		3.23E-01	18.4	0.018		No (a)	
Dibenzofuran	2 / 545	0.4	0.03685 - 0.59	0.0261 - 7.8	L	2.45E-01	2.65E-01		2.65E-01	NSV	---		No (c)	
Diethyl phthalate	21 / 545	4	0.013 - 0.5975	0.0261 - 7.8	L	2.05E-01	2.25E-01		2.25E-01	100	0.002		No (a)	
Dimethyl phthalate	2 / 545	0.4	0.868 - 1.675	0.0261 - 7.8	L	2.17E-01	2.47E-01		2.47E-01	200	0.001		No (a)	
di-n-Butyl phthalate	95 / 511	19	0.02275 - 7.512	0.0261 - 7.8	L	5.76E-01	6.49E-01		6.49E-01	200	0.003		No (a)	
di-n-Octyl phthalate	1 / 545	0.2	0.19 - 0.19	0.0261 - 7.8	L	2.15E-01	1.55E-01		1.55E-01	709	0.0002		No (a)	
Ethyl methanesulfonate	2 / 52	4	0.02525 - 0.03915	0.0261 - 0.352	L	1.79E-02	2.03E-02	(i)	2.03E-02	NSV	---		No (c)	
Fluoranthene	32 / 565	6	0.013 - 3.9	0.0261 - 7.8	L	2.29E-01	2.49E-01		2.49E-01	122	0.00204		No (a)	
Fluorene	2 / 565	0.4	0.09665 - 0.13	0.0261 - 7.8	L	3.32E-02	3.76E-02	(i)	3.76E-02	30	0.00125		No (a)	
Hexachloroethane	1 / 545	0.2	0.0443 - 0.0443	0.0261 - 7.8	L	2.39E-01	1.67E-02		1.67E-02	0.596	0.028		No (a)	
Indeno(1,2,3-cd)pyrene	14 / 565	2	0.0081 - 1.6	0.017 - 7.8	L	1.48E-02	1.67E-02	(i)	1.67E-02	109	0.00015		No (a)	
Naphthalene [h]	6 / 565	1	0.18 - 3.912	0.0084 - 7.8	L	2.09E-01	2.17E-01		2.17E-01	0.0994	2.18		No (c)	
Phenanthrene	22 / 565	4	0.0228 - 4.6	0.0261 - 7.8	L	2.21E-01	2.65E-01		2.65E-01	45.7	0.0058		No (a)	
Phenol	1 / 545	0.2	0.12 - 0.12	0.0261 - 7.8	L	2.65E-02	3.04E-02	(i)	3.04E-02	30	0.00101		No (a)	
Pyrene	25 / 565	4	0.0123 - 2.8	0.0261 - 7.8	L	2.20E-01	2.53E-01		2.53E-01	78.5	0.00323		No (a)	
Volatile Organics														
1,1,1-Trichloroethane	3 / 482	1	0.00655 - 0.032	0.0014 - 0.025	L	2.73E-03	2.98E-03		2.98E-03	29.8	0.000100		No (a)	
1,1-Dichloroethene	1 / 482	0.2	0.002 - 0.002	0.0011 - 0.025	L	9.63E-04	1.19E-03	(i)	1.19E-03	8.28	0.0001		No (a)	
2-Butanone	4 / 474	1	0.006 - 0.0666	0.005 - 0.25	L	1.91E-02	2.06E-02		2.06E-02	89.6	0.0002		No (a)	
2-Hexanone	2 / 474	0.4	0.0092 - 0.0097	0.005 - 0.25	L	1.75E-02	4.43E-03		4.43E-03	12.6	0.0004		No (a)	

Table 6-17
Selection of Constituents of Potential Ecological Concern
Total Soil [a]
Industrial Sub-Area

Chemical	Detection Frequency	Percent Hits	Range of Values, mg/kg: Detected Concentrations Minimum - Maximum	Range of Values, mg/kg: Reporting Limits Minimum - Maximum	Statistical Distribution [b]	Mean mg/kg	95% UCL mg/kg [c]		Screening Concentration mg/kg [d]	ESV mg/kg [e]	HQ_{SCREEN}	TCEQ Bioaccumulative Compound?	COPEC? [f,g]
Acetone	28 / 470	6	0.0049 - 0.77	0.003 - 0.5	L	3.63E-02	3.71E-02		3.71E-02	2.5	0.01		No (a)
Benzene	2 / 482	0.4	0.00425 - 0.013	0.0013 - 0.025	L	2.66E-03	2.83E-03		2.83E-03	0.255	0.01		No (a)
Carbon disulfide	5 / 474	1	0.003 - 0.053	0.005 - 0.025	L	3.03E-03	3.36E-03		3.36E-03	0.0941	0.04		No (a)
Chlorobenzene	2 / 482	0.4	0.0264 - 0.0588	0.001 - 0.025	L	2.78E-03	2.84E-03		2.84E-03	40	0.0001		No (a)
Chloroform	4 / 482	1	0.006 - 0.11	0.0014 - 0.025	L	2.91E-03	3.24E-03		3.24E-03	1.19	0.003		No (a)
Ethylbenzene	1 / 482	0.2	0.002 - 0.002	0.001 - 0.025	L	6.88E-04	7.85E-04	(i)	7.85E-04	5.16	0.0002		No (a)
Methylene chloride	17 / 479	4	0.00135 - 0.027	0.002 - 0.073	L	3.17E-03	3.27E-03		3.27E-03	4.05	0.0008		No (a)
p-Isopropyltoluene	3 / 63	4.8	0.006 - 0.032	0.005 - 0.0162	L	3.68E-03	4.91E-03		4.91E-03	NSV	---		No (c)
Styrene	2 / 482	0.4	0.00065 - 0.003	0.001 - 0.025	L	2.63E-03	2.81E-03		2.81E-03	300	0.000009		No (a)
Tetrachloroethene	3 / 482	1	0.003 - 0.204	0.001 - 0.025	L	3.11E-03	3.69E-03		3.69E-03	9.92	0.0004		No (a)
Toluene	5 / 482	1	0.002 - 0.0224	0.0031 - 0.025	L	2.75E-03	2.87E-03		2.87E-03	200	0.00001		No (a)
trans-1,3-Dichloropropene	2 / 474	0.4	0.003 - 0.01	0.0015 - 0.025	L	2.66E-03	2.79E-03		2.79E-03	0.398	0.01		No (a)
Trichloroethene	12 / 482	2	0.001 - 0.256	0.0019 - 0.0325	L	4.31E-03	5.16E-03		5.16E-03	12.4	0.0004		No (a)
Vinyl chloride	1 / 482	0.2	0.497 - 0.497	0.0021 - 0.068	L	6.64E-03	7.50E-03		7.50E-03	0.646	0.01		No (a)
Xylenes, Total	3 / 447	1	0.00425 - 0.0997	0.005 - 0.025	L	3.01E-03	3.24E-03		3.24E-03	10	0.0003		No (a)
Total Petroleum Hydrocarbons													
Hydrocarbons as Diesel Fuel	3 / 21	14	493 - 1760	54 - 66.7	NP	1.87E+02	3.78E+02		3.78E+02	NSV	---		No (e)
Total Hydrocarbons	8 / 25	32	41 - 1760	10 - 66.7	NP	1.87E+02	3.51E+02		3.51E+02	NSV	---		No (e)

Notes:

[a] Total soil is defined as samples 0 to 3 feet below ground surface (bgs). Deeper samples were also considered total soil if at least 50% of their sampling depth interval was less than 3 ft bgs (e.g., 2 to 4 ft bgs).

[b] Statistical distribution: N = Normal distribution; L = Lognormal distribution; NP = Nonparametric distribution for those sample datasets that fail normal and lognormal distribution.

[c] The 95% upper confidence limit (UCL) calculated using bootstrapping with 5000 replications.

[d] The screening concentration used to calculate the HQ_{screen} is the 95% UCL, or the MDC if sample size is five or less.

[e] See Table 6-14.

[f] No = Chemical is not chosen as a COPEC; Yes = Chemical is chosen as a COPEC.

[g] Rationale for exclusion of chemical as a COPEC:

(a) The screening concentration is less than the ESV.
(b) Chemical is an essential nutrient.
(c) The detection frequency is less than 2 percent, or if frequency of detection is between 2 and 5 percent, results of spatial evaluation indicates that no hot spot is present.
(d) Evaluation of DDD, DDE, and DDT is limited to the p,p'- isomers.
(e) Total hydrocarbons consist of a broad spectrum of weathered petroleum components. The individual chemicals that are primarily associated with the toxicity of hydrocarbon contamination (e.g., PAHs) are analyzed individually at the Industrial Sub-Area, and present a more precise reflection of potential fuel-related contamination than data associated with hydrocarbon mixtures. Therefore, total hydrocarbons are not selected as COPEC in the Industrial Sub-Area.

* Although the detection frequency is less than 2 or 5 percent or the hazard quotient is less than 1, chemical is selected as a COPEC because it is a TCEQ bioaccumulative compound.

[h] Analysis of chemical was performed by two different methods. Data were combined to include each sample analyzed for this chemical, regardless of the method. The sample with the lowest detection limit was the one selected for inclusion the dataset.

[i] Nondetected samples with detection limits greater than the maximum detected concentration were not included in the calculation of the mean or 95% UCL.

COPEC constituent of potential ecological concern
ESV ecological screening value
HQ_{screen} screening-level hazard quotient
MDC maximum detected concentration
mg/kg milligrams per kilogram
NA not applicable
NSV no screening value available
TCEQ Texas Commission on Environmental Quality

Table 6-18
Selection of Constituents of Potential Ecological Concern
Total Soil [a]
Low Impact Sub-Area

Chemical	Detection Frequency	Percent Hits	Range of Values, mg/kg: Detected Concentrations Minimum - Maximum	Range of Values, mg/kg: Reporting Limits Minimum - Maximum	Statistical Distribution [b]	Mean mg/kg	95% UCL mg/kg [c]		Screening Concentration mg/kg [d]	ESV mg/kg [e]	HQ_{SCREEN}	TCEQ Bioaccumulative Compound?	COPEC? [f,g]	
Inorganics														
Aluminum	124 / 124	100	678 - 21700	1.01 - 10.9	L	5.37E+03	5.81E+03		5.81E+03	NSV	---		No (a)	
Antimony	16 / 36	44	0.268 - 1.43	0.26 - 1.2	NP	5.12E-01	5.68E-01		5.68E-01	0.27	2.1		Yes	
Arsenic	142 / 144	99	0.426 - 232	0.1 - 1	L	1.08E+01	1.44E+01		1.44E+01	18	0.8		No (b)	
Barium	147 / 147	100	20.2 - 397	0.2 - 1.4	L	1.02E+02	1.11E+02		1.11E+02	330	0.3		No (b)	
Beryllium	98 / 107	92	0.14 - 2.24	0.0207 - 0.219	L	7.04E-01	7.90E-01		7.90E-01	21	0.04		No (b)	
Boron	5 / 107	4.7	1.8475 - 3.19	1.01 - 2.19	L	1.08E+00	1.17E+00		1.17E+00	0.5	2		No (c)	
Cadmium	31 / 144	22	0.272 - 6.08	0.101 - 1	L	3.19E-01	3.95E-01		3.95E-01	0.36	1	Yes	Yes	*
Calcium	17 / 17	100	547 - 3280	-	N	1.88E+03	2.09E+03		2.09E+03	Nutrient	---		No (d)	
Chloride	3 / 15	20	44 - 310	10 - 10	NP	4.53E+01	8.07E+01		8.07E+01	Nutrient	---		No (d)	
Chromium	145 / 145	100	2.28 - 59.4	0.503 - 1.4	L	1.09E+01	1.16E+01		1.16E+01	0.4	29	Yes	Yes	
Cobalt	3 / 17	18	5.52 - 6.91	5.17 - 6	NP	3.31E+00	4.23E+00		4.23E+00	13	0.3		No (b)	
Copper	124 / 124	100	0.694 - 118	0.497 - 0.547	L	6.48E+00	7.35E+00		7.35E+00	61	0.1	Yes	Yes	*
Iron	124 / 124	100	1408 - 48410	5.03 - 10.9	L	9.10E+03	1.01E+04		1.01E+04	200	50		Yes	
Lead	147 / 147	100	4 - 197	0.5 - 3.04	L	2.03E+01	2.30E+01		2.30E+01	11	2.1	Yes	Yes	*
Magnesium	124 / 124	100	65.4 - 2260	5.03 - 10.9	L	4.60E+02	5.09E+02		5.09E+02	Nutrient	---		No (d)	
Manganese	124 / 124	100	13.9 - 5436	0.993 - 1.09	L	8.30E+02	9.62E+02		9.62E+02	500	1.9		Yes	
Mercury	110 / 145	76	0.01 - 0.231	0.01 - 0.14	L	5.07E-02	5.69E-02		5.69E-02	0.1	0.6	Yes	Yes	*
Molybdenum	2 / 107	2	0.52 - 1.47	0.503 - 1.09	L	5.22E-01	5.61E-01		5.61E-01	2	0.3		No (b)	
Nickel	129 / 144	90	1.48 - 29.5	0.503 - 6	L	6.19E+00	6.83E+00		6.83E+00	30	0.2	Yes	Yes	*
Potassium	17 / 17	100	184 - 769	-	N	4.73E+02	5.32E+02		5.32E+02	Nutrient	---		No (d)	
Selenium	39 / 147	27	0.075 - 2.3	0.1 - 2.3	L	3.70E-01	3.97E-01		3.97E-01	1	0.4	Yes	Yes	*
Silver	6 / 141	4	0.196 - 0.447	0.179 - 1.4	L	1.67E-01	1.89E-01		1.89E-01	2	0.1		No (b)	
Strontium	124 / 124	100	2.1 - 51.8	0.497 - 0.547	L	1.30E+01	1.43E+01		1.43E+01	NSV	---		Yes	
Vanadium	107 / 107	100	3.41 - 53	0.497 - 0.547	L	1.45E+01	1.54E+01		1.54E+01	7.8	2.0		Yes	
Zinc	121 / 124	98	5.51 - 499	1.01 - 5.47	L	4.80E+01	5.97E+01		5.97E+01	120	0.5	Yes	Yes	*
General Chemistry														
Nitrate	10 / 15	67	0.48 - 5.33	0.01 - 0.1	NP	1.13E+00	1.86E+00		1.86E+00	NSV	---		Yes	
Sulfate	15 / 15	100	30 - 4900	5 - 300	L	1.38E+03	2.06E+03		2.06E+03	NSV	---		Yes	
Dioxins/Furans														
2,3,7,8-TCDD TEQ	10 / 10	100	1.91E-06 - 9.40E-06	NA - NA	NP	3.18E-06	3.95E-06		3.95E-06	3.15E-06	1.3	Yes	Yes	
Polychlorinated Biphenyls (PCBs)														
Aroclor 1242	43 / 105	41	0.00154 - 0.0105	0.00137 - 0.006	L	2.53E-03	3.04E-03		3.04E-03	40	0.0001	Yes	Yes	*
Aroclor 1248	12 / 105	11	0.00154 - 0.0096375	0.00137 - 0.006	L	1.17E-03	1.37E-03		1.37E-03	40	0.00003	Yes	Yes	*
Aroclor 1254	41 / 105	39	0.00154 - 0.0208	0.00137 - 0.006	L	3.27E-03	4.04E-03		4.04E-03	40	0.0001	Yes	Yes	*
Aroclor 1260	35 / 105	33	0.00154 - 0.18	0.00137 - 0.006	L	4.04E-03	6.22E-03		6.22E-03	40	0.0002	Yes	Yes	*
Aroclor 1268	1 / 101	1	0.00154 - 0.00154	0.00137 - 0.00238	L	8.43E-04	8.97E-04		8.97E-04	40	0.00002	Yes	Yes	*
Organochlorine Pesticides														
1,2,3,4-Tetrachlorobenzene	1 / 107	1	0.000296 - 0.000296	0.00015 - 0.000477	N	1.66E-04	1.88E-04		1.88E-04	10	0.00002		No (b)	
1,2,4,5-Tetrachloro-benzene	57 / 107	53	0.000189 - 0.006465	0.00015 - 0.000477	L	4.68E-04	5.81E-04		5.81E-04	10	0.0001		No (b)	
4,4'-DDD	10 / 108	9	0.000403 - 0.0628	0.00015 - 0.0074	L	8.25E-04	1.42E-03		1.42E-03	0.758	0.002	Yes	Yes	*
4,4'-DDE	101 / 108	94	0.000209 - 0.0524	0.00015 - 0.0027	L	3.08E-03	4.15E-03		4.15E-03	0.596	0.01	Yes	Yes	*
4,4'-DDT	47 / 108	44	0.000286 - 0.0637	0.00015 - 0.008	L	1.10E-03	1.82E-03		1.82E-03	0.0035	0.5	Yes	Yes	*
Aldrin	2 / 108	2	0.000409 - 0.00048575	0.00015 - 0.0027	L	1.81E-04	2.04E-04		2.04E-04	0.00332	0.1	Yes	Yes	*
alpha-Chlordane	20 / 107	19	0.000318 - 0.003005	0.00015 - 0.000477	L	3.11E-04	3.68E-04		3.68E-04	0.224	0.002	Yes	Yes	*
Chlordane	4 / 108	4	0.000248 - 0.000462	0.00015 - 0.0094	L	2.16E-04	1.93E-04	(h)	1.93E-04	0.224	0.001	Yes	Yes	*
cis-Nonachlor	11 / 107	10	0.000322 - 0.00192	0.00015 - 0.000477	L	2.19E-04	2.52E-04		2.52E-04	0.224	0.001	Yes	Yes	*
Dieldrin	3 / 108	3	0.00034 - 0.00053	0.00015 - 0.0013	L	1.76E-04	1.88E-04		1.88E-04	0.000032	5.9	Yes	Yes	*
Endosulfan II	5 / 108	4.6	0.000267 - 0.00329	0.00015 - 0.0027	L	2.34E-04	2.91E-04		2.91E-04	0.119	0.002		No (b)	
Endrin	21 / 108	19	0.000249 - 0.00150275	0.00015 - 0.004	L	2.64E-04	2.77E-04		2.77E-04	0.0101	0.03	Yes	Yes	*
Hexachlorobenzene	12 / 107	11	0.000256 - 0.00178	0.00015 - 0.000477	L	2.04E-04	2.36E-04		2.36E-04	0.199	0.001	Yes	Yes	*
Mirex	20 / 107	19	0.000301 - 0.00241	0.00015 - 0.000477	L	2.87E-04	3.43E-04		3.43E-04	NSV	---	Yes	Yes	*
o,p'-DDD	3 / 107	3	0.000402 - 0.0186	0.00015 - 0.000477	L	3.42E-04	6.53E-04		6.53E-04	0.758	0.001		No (b)	
o,p'-DDE	5 / 107	4.7	0.000401 - 0.00201	0.00015 - 0.000477	L	1.92E-04	2.19E-04		2.19E-04	0.596	0.0004		No (b)	
o,p'-DDT	11 / 107	10	0.000228 - 0.00112	0.00015 - 0.000477	L	2.15E-04	2.41E-04		2.41E-04	0.0035	0.07		No (b)	
Oxychlordane	2 / 107	2	0.000419 - 0.000554	0.00015 - 0.000477	L	1.71E-04	1.84E-04		1.84E-04	0.224	0.0008	Yes	Yes	
Pentachloro-anisole	25 / 107	23	0.000255 - 0.0315	0.00015 - 0.000477	L	5.57E-04	9.03E-04		9.03E-04	NSV	---		Yes	
trans-Nonachlor	19 / 107	18	0.000152 - 0.00198	0.00015 - 0.000477	L	2.64E-04	3.16E-04		3.16E-04	0.224	0.001	Yes	Yes	
Perchlorate														
Perchlorate	1 / 7	14	0.28 - 0.28	0.021 - 0.024	NP	4.97E-02	9.01E-02		9.01E-02	NSV	---		Yes	
Semivolatile Organics														

Table 6-18
Selection of Constituents of Potential Ecological Concern
Total Soil [a]
Low Impact Sub-Area

Chemical	Detection Frequency	Percent Hits	Range of Values, mg/kg: Detected Concentrations Minimum - Maximum	Range of Values, mg/kg: Reporting Limits Minimum - Maximum	Statistical Distribution [b]	Mean mg/kg	95% UCL mg/kg [c]		Screening Concentration mg/kg [d]	ESV mg/kg [e]	HQ_{SCREEN}	TCEQ Bioaccumulative Compound?	COPEC? [f,g]	
1,3-Dichlorobenzene	19 / 143	13	0.0322 - 0.103	0.0274 - 3.6	L	2.32E-02	2.62E-02	(i)	2.62E-02	37.7	0.0007		No (b)	
1-Naphthylamine	3 / 107	3	0.04 - 0.102	0.0274 - 0.383	L	2.47E-02	2.71E-02		2.71E-02	9.34	0.003		No (b)	
2-Methylnaphthalene	1 / 143	1	0.07535 - 0.07535	0.0274 - 3.6	L	1.66E-02	1.79E-02	(i)	1.79E-02	3.24	0.01		No (b)	
2-Picoline	3 / 107	3	0.0394 - 0.201	0.0274 - 0.383	L	2.57E-02	3.44E-02		3.44E-02	9.9	0.003		No (b)	
4-Aminobiphenyl	1 / 107	1	0.0383 - 0.0383	0.0274 - 0.383	L	2.35E-02	2.62E-02		2.62E-02	NSV	---		No (c)	
4-Chloro-3-methylphenol	1 / 143	1	0.0458 - 0.0458	0.0274 - 3.6	L	1.67E-02	1.77E-02	(i)	1.77E-02	NSV	---		No (c)	
Acenaphthylene	1 / 43	2	0.23 - 0.23	0.036 - 3.6	NP	2.26E-01	3.77E-02		3.77E-02	682	0.0001		No (b)	
Aniline	6 / 107	6	0.026775 - 0.558	0.0274 - 0.383	L	2.94E-02	3.89E-02		3.89E-02	0.0568	0.7		No (b)	
Benzoic Acid	11 / 126	9	0.032125 - 0.156	0.0274 - 1.65	L	2.19E-02	2.50E-02	(i)	2.50E-02	NSV	---		Yes	
bis(2-Ethylhexyl)phthalate	10 / 143	7	0.0308 - 1.5	0.0274 - 3.6	L	1.01E-01	1.53E-01		1.53E-01	0.925	0.2		No (b)	
Butyl benzyl phthalate	2 / 143	1	0.114 - 0.148	0.0274 - 3.6	L	8.46E-02	9.45E-02		9.45E-02	0.239	0.4		No (b)	
Diethyl phthalate	6 / 143	4	0.0317 - 0.0787	0.0274 - 3.6	L	8.48E-02	7.45E-02		7.45E-02	100	0.0007		No (b)	
di-n-Butyl phthalate	19 / 143	13	0.030325 - 2.33	0.0274 - 3.6	L	1.57E-01	1.98E-01		1.98E-01	200	0.001		No (b)	
Ethyl methanesulfonate	1 / 107	1	0.0413 - 0.0413	0.0274 - 0.383	L	2.35E-02	2.35E-02		2.35E-02	NSV	---		No (c)	
Naphthalene	2 / 150	1	0.025125 - 0.98	0.0274 - 3.6	L	8.65E-02	1.16E-01		1.16E-01	0.0994	1.2		No (c)	
Pentachlorophenol	6 / 143	4	1.3 - 11	0.0274 - 9.2	L	3.80E-01	5.32E-01		5.32E-01	0.0018	296	Yes	Yes	*
Phenol	2 / 143	1	0.0407 - 1.04	0.0274 - 3.6	L	9.04E-02	1.10E-01		1.10E-01	30	0.004		No (b)	
Volatile Organics														
Acetone	2 / 20	10	0.094 - 0.124	0.011 - 0.1	NP	4.70E-02	6.11E-02		6.11E-02	2.5	0.02		No (b)	
Methylene chloride	3 / 20	15	0.017 - 0.021	0.005 - 0.014	NP	5.30E-03	6.61E-03		6.61E-03	4.05	0.002		No (b)	

Notes:

[a] Total soil is defined as samples 0 to 3 feet below ground surface (bgs). Deeper samples were also considered total soil if at least 50% of their sampling depth interval was less than 3 ft bgs (e.g., 2 to 4 ft bgs).
[b] Statistical distribution: N = Normal distribution; L = Lognormal distribution; NP = Nonparametric distribution for those sample datasets that fail normal and lognormal distribution.
[c] The 95% upper confidence limit (UCL) calculated using bootstrapping with 5000 replications.
[d] The screening concentration used to calculate the HQ_{screen} is the 95% UCL, or the MDC if sample size is five or less.
[e] See Table 6-14.
[f] No = Chemical is not chosen as a COPEC; Yes = Chemical is chosen as a COPEC.
[g] Rationale for exclusion of chemical as a COPEC:
(a) Aluminum is identified as a COPEC only for soils with pH less than 5.5 (EPA, 2003, *Guidance for Developing Ecological Soil Screening Levels* , Office of Solid Waste and Remedial Response, Washington, D.C., November). The average soil pH in this sub-area is 5.8 (range = 5.4 - 7.9). Therefore, aluminum is not selected as a COPEC.
(b) The screening concentration is less than the ESV.
(c) The detection frequency is less than 2 percent, or if frequency of detection is between 2 and 5 percent, results of spatial evaluation indicates that no hot spot is present.
(d) Chemical is an essential nutrient.
(e) Evaluation of DDD, DDE, and DDT is limited to the p,p'- isomers.
* Although the detection frequency is less than 2 or 5 percent or the hazard quotient is less than 1, chemical is selected as a COPEC because it is a TCEQ bioaccumulative compound.
[h] The 95% UCL for chlordane is lower than the mean due to the presence of elevated detection limits and the different surrogate values used for calculating the mean and the 95% UCL. Because the 95% UCL did not exceed the maximum detected concentration, the elevated detection limits were not removed from the dataset used for the derivation of the statistics.
[i] Nondetected samples with detection limits greater than the maximum detected concentration were not included in the calculation of the mean or 95% UCL.

COPEC constituent of potential ecological concern
ESV ecological screening value
HQ_{screen} screening-level hazard quotient
MDC maximum detected concentration
mg/kg milligrams per kilogram
NA not applicable
NSV no screening value available
TCEQ Texas Commission on Environmental Quality

Table 6-19
Selection of Constituents of Potential Ecological Concern
Total Soil [a]
Waste Sub-Area

Chemical	Detection Frequency	Percent Hits	Range of Values, mg/kg: Detected Concentrations Minimum - Maximum	Range of Values, mg/kg: Reporting Limits Minimum - Maximum	Statistical Distribution [b]	Mean mg/kg	95% UCL mg/kg [c]	Screening Concentration mg/kg [d]	ESV mg/kg [e]	HQ_{SCREEN}	TCEQ Bioaccumulative Compound?	COPEC? [f,g]	
Inorganics													
Aluminum	26 / 26	100	1983 - 21500	10.1 - 31	L	8.02E+03	9.30E+03	9.30E+03	NSV	---		Yes	
Antimony	3 / 48	6	0.48 - 1.53	1.08 - 9.41	NP	6.95E-01	8.22E-01 (h)	8.22E-01	0.27	3.0		Yes	
Arsenic	90 / 103	87	1.05 - 16.1	0.505 - 9.09	L	3.19E+00	3.53E+00	3.53E+00	18	0.2		No (a)	
Barium	103 / 103	100	27.5 - 20500	1.01 - 31	L	4.81E+02	5.53E+02	5.53E+02	330	1.7		Yes	
Beryllium	14 / 22	64	0.38 - 1.4	0.202 - 0.784	L	6.24E-01	7.43E-01	7.43E-01	21	0.04		No (a)	
Cadmium	17 / 103	17	0.362 - 7.33	0.252 - 1.565	L	5.66E-01	6.67E-01	6.67E-01	0.36	1.85	Yes	Yes	*
Calcium	18 / 20	90	118 - 15100	530 - 780	L	1.89E+03	2.78E+03	2.78E+03	Nutrient	---		No (b)	
Chloride	15 / 25	60	2.7 - 463	0.5 - 50.2	L	5.16E+01	7.73E+01	7.73E+01	Nutrient	---		No (b)	
Chromium	103 / 103	100	5.58 - 59.6	1.01 - 2.85	L	1.57E+01	1.72E+01	1.72E+01	0.4	43	Yes	Yes	
Cobalt	13 / 20	65	0.75 - 19.8	1 - 7.8	L	5.34E+00	6.55E+00	6.55E+00	13	0.5		No (a)	
Copper	39 / 39	100	1.4 - 53.1	0.505 - 3.92	NP	9.30E+00	1.15E+01	1.15E+01	61	0.2	Yes	Yes	*
Iron	26 / 26	100	5247 - 26000	10.1 - 16	L	1.27E+04	1.42E+04	1.42E+04	200	71		Yes	
Lead	103 / 103	100	1.6 - 1290	0.318 - 115.47	L	4.62E+01	5.58E+01	5.58E+01	11	5.1	Yes	Yes	
Magnesium	24 / 26	92	179 - 1800	10.1 - 780	N	8.30E+02	9.51E+02	9.51E+02	Nutrient	---		No (b)	
Manganese	26 / 26	100	28 - 1815	1.01 - 2.35	L	3.78E+02	4.93E+02	4.93E+02	500	0.99		No (a)	
Mercury	24 / 103	23	0.023 - 1.1	0.0105 - 0.23	L	8.59E-02	9.67E-02	9.67E-02	0.1	0.97	Yes	Yes	*
Nickel	94 / 98	96	2.81 - 34	1.01 - 6.3	L	7.73E+00	8.42E+00	8.42E+00	30	0.3	Yes	Yes	*
Potassium	17 / 20	85	313 - 2300	530 - 780	L	8.07E+02	9.49E+02	9.49E+02	Nutrient	---		No (b)	
Selenium	22 / 103	21	0.58 - 1.94	0.42 - 1.57	L	5.94E-01	6.71E-01	6.71E-01	1	0.7	Yes	Yes	*
Silver	4 / 103	4	0.55 - 1.78	0.182 - 2.85	N	6.49E-01	8.64E-01	8.64E-01	2	0.4		No (a)	
Sodium	9 / 16	56	21.1 - 1200	124 - 780	L	2.49E+02	3.19E+02	3.19E+02	Nutrient	---		No (b)	
Strontium	26 / 26	100	2.4 - 71	0.505 - 7.8	L	2.12E+01	2.71E+01	2.71E+01	NSV	---		Yes	
Thallium	7 / 93	8	0.18 - 4.8	0.531 - 5.91	L	5.50E-01	6.19E-01	6.19E-01	1	0.6		No (a)	
Vanadium	22 / 22	100	10.6 - 43.3	0.505 - 7.8	L	2.08E+01	2.36E+01	2.36E+01	7.8	3.0		Yes	
Zinc	39 / 39	100	8 - 250	0.39 - 5.49	L	4.15E+01	5.17E+01	5.17E+01	120	0.4	Yes	Yes	*
General Chemistry													
Nitrate	13 / 25	52	0.09 - 11.82	0.06 - 0.245	NP	1.00E+00	1.34E+00	1.34E+00	NSV	---		Yes	
Sulfate	23 / 25	92	1.47 - 3816.9	0.94 - 50.05	L	2.41E+02	4.00E+02	4.00E+02	NSV	---		Yes	
Dioxins/Furans													
2,3,7,8-TCDD TEQ	15 / 15	100	4.07E-07 - 1.98E-04	NA - NA	L	2.05E-05	3.40E-05	3.40E-05	3.15E-06	10.8	Yes	Yes	
Nitroaromatics													
1,3,5-Trinitrobenzene	11 / 70	16	0.54 - 360	0.15 - 110	L	1.26E+01	1.71E+01	1.71E+01	0.376	45		Yes	
1,3-Dinitrobenzene	3 / 70	4	0.42 - 1.7	0.05 - 110	L	1.14E+00	1.24E+00	1.24E+00	0.655	1.9		Yes	
2,4,6-Trinitrotoluene	11 / 70	16	0.43 - 10000	0.1 - 110	L	1.48E+02	2.87E+02	2.87E+02	30	9.6		Yes	
2,4-Dinitrotoluene [i]	11 / 82	13	0.445 - 4000	0.0294 - 110	L	5.04E+01	1.01E+02	1.01E+02	1.28	79		Yes	
2,6-Dinitrotoluene [i]	14 / 84	17	0.445 - 500	0.0294 - 120	L	7.15E+00	1.36E+01	1.36E+01	0.0328	415		Yes	
2-Amino-4,6-dinitrotoluene	6 / 70	9	0.2675 - 16	0.05 - 110	L	1.44E+00	3.54E+00	3.54E+00	80	0.04		No (a)	
4-Amino-2,6-dinitrotoluene	5 / 70	7	0.2675 - 4.8	0.05 - 110	L	1.19E+00	3.04E+00	3.04E+00	80	0.04		No (a)	
HMX	7 / 70	10	0.2875 - 12	0.1 - 1000	L	1.00E+00	1.36E+00 (h)	1.36E+00	NSV	---		Yes	
RDX	2 / 70	3	0.22 - 0.8	0.1 - 450	L	9.58E-02	1.33E-01 (h)	1.33E-01	100	0.001		No (a)	
Polychlorinated Biphenyls (PCBs)													
Aroclor 1242	2 / 21	10	0.00445 - 0.00516	0.00147 - 0.21	NP	2.09E-03	3.08E-03 (h)	3.08E-03	40	0.0001	Yes	Yes	*
Aroclor 1254	3 / 21	14	0.00595 - 0.0111	0.00147 - 0.21	NP	4.33E-03	6.24E-03 (h)	6.24E-03	40	0.0002	Yes	Yes	*
Aroclor 1260	3 / 21	14	0.00179 - 0.00516	0.00147 - 0.21	NP	1.97E-03	2.60E-03 (h)	2.60E-03	40	0.0001	Yes	Yes	*
Organochlorine Pesticides													
1,2,4,5-Tetrachlorobenzene	4 / 12	33	0.000308 - 0.000723	0.000295 - 0.0355	NP	8.07E-03	5.01E-04	5.01E-04	10	0.0001		No (a)	
4,4'-DDD	2 / 21	10	0.00055 - 0.001	0.000295 - 0.22	NP	3.62E-04	5.15E-04 (h)	5.15E-04	0.758	0.001	Yes	Yes	*
4,4'-DDE	4 / 21	19	0.00103 - 0.00577	0.000295 - 0.081	NP	1.86E-03	2.45E-03 (h)	2.45E-03	0.596	0.00	Yes	Yes	*
4,4'-DDT	2 / 21	10	0.000355 - 0.000377	0.000295 - 0.24	NP	2.21E-04	2.93E-04 (h)	2.93E-04	0.0035	0.08	Yes	Yes	*
alpha-Chlordane	1 / 6	17	0.000403 - 0.000403	0.000295 - 0.000355	NP	1.98E-04	2.13E-04	2.13E-04	0.224	0.001	Yes	Yes	*
Endrin	1 / 21	4.8	0.00104 - 0.00104	0.000295 - 0.12	NP	3.35E-04	4.91E-04 (h)	4.91E-04	0.0101	0.0	Yes	Yes	*
Mirex	1 / 6	17	0.000629 - 0.000629	0.000295 - 0.000355	NP	2.38E-04	2.89E-04	2.89E-04	NSV	---	Yes	Yes	
Pentachloroanisole	1 / 6	17	0.000428 - 0.000428	0.000295 - 0.000355	NP	2.05E-04	2.58E-04	2.58E-04	NSV	---		Yes	

Table 6-19
Selection of Constituents of Potential Ecological Concern
Total Soil [a]
Waste Sub-Area

Chemical	Detection Frequency	Percent Hits	Range of Values, mg/kg: Detected Concentrations Minimum - Maximum	Range of Values, mg/kg: Reporting Limits Minimum - Maximum	Statistical Distribution [b]	Mean mg/kg	95% UCL mg/kg [c]		Screening Concentration mg/kg [d]	ESV mg/kg [e]	HQ_{SCREEN}	TCEQ Bioaccumulative Compound?	COPEC? [f,g]	
Perchlorate														
Perchlorate	42 / 116	36	0.016 - 7.11	0.00517 - 4.78	L	1.63E-01	2.61E-01		2.61E-01	NSV	---		Yes	
Semivolatile Organics														
Benzo(a)anthracene	1 / 42	2	1.6 - 1.6	0.0294 - 2.4	NP	3.35E-01	3.52E-01		3.52E-01	5.21	0.1		No (a)	
Benzo(a)pyrene	1 / 42	2	1.7 - 1.7	0.0294 - 2.2	NP	3.06E-01	3.66E-01		3.66E-01	1.52	0.2		No (a)	
Benzo(b)fluoranthene	1 / 42	2	0.75 - 0.75	0.0294 - 2.4	NP	3.12E-01	3.04E-01		3.04E-01	59.8	0.01		No (a)	
Benzo(ghi)perylene	1 / 42	2	1.1 - 1.1	0.0294 - 2.4	NP	3.23E-01	4.30E-01		4.30E-01	119	0.004		No (a)	
Benzoic Acid	1 / 42	2	0.0693 - 0.0693	0.0294 - 10.667	NP	1.30E+00	2.99E-02		2.99E-02	NSV	---		No (c)	
bis(2-Ethylhexyl)phthalate	5 / 42	12	0.396 - 3.35	0.0294 - 2.4	NP	4.76E-01	6.39E-01		6.39E-01	0.925	0.7		No (a)	
Butyl benzyl phthalate	3 / 42	7	1.2 - 3	0.0294 - 2.4	NP	4.45E-01	5.43E-01		5.43E-01	0.239	2.3		Yes	
Chrysene	1 / 42	2	1.3 - 1.3	0.0294 - 2.4	NP	3.28E-01	3.13E-01		3.13E-01	4.73	0.1		No (a)	
di-n-Butyl phthalate	4 / 37	11	0.42 - 4.7	0.0294 - 2.4	NP	5.25E-01	6.67E-01		6.67E-01	200	0.003		No (a)	
Fluoranthene	2 / 42	4.8	0.37 - 2.3	0.0294 - 2.4	NP	3.52E-01	6.03E-01		6.03E-01	122	0.005		No (a)	
Hexachlorobenzene [i]	2 / 42	4.8	0.00106 - 0.28	0.000295 - 2.2	NP	6.30E-02	1.10E-01	(h)	1.10E-01	0.199	0.6	Yes	Yes	*
Indeno(1,2,3-cd)pyrene	1 / 42	2	1.1 - 1.1	0.0294 - 2.4	NP	3.23E-01	4.66E-01		4.66E-01	109	0.004		No (a)	
Pyrene	2 / 42	4.8	0.36 - 1.7	0.0294 - 2.4	NP	3.37E-01	3.42E-01		3.42E-01	78.5	0.004		No (a)	
Volatile Organics														
1,1-Dichloroethane	1 / 87	1	0.067 - 0.067	0.005 - 0.011	L	3.95E-03	4.23E-03		4.23E-03	20.1	0.0002		No (a)	
1,2-Dichloroethane	1 / 87	1	0.006 - 0.006	0.005 - 0.011	L	3.25E-03	3.50E-03		3.50E-03	21.2	0.0002		No (a)	
2-Butanone	2 / 87	2	0.015 - 0.01775	0.011 - 0.05	L	8.70E-03	1.16E-02		1.16E-02	89.6	0.0001		No (a)	
2-Hexanone	2 / 87	2	0.022 - 0.071	0.011 - 0.05	L	9.48E-03	1.14E-02		1.14E-02	12.6	0.001		No (a)	
Acetone	29 / 87	33	0.0036 - 0.113	0.011 - 0.1	L	1.87E-02	2.09E-02		2.09E-02	2.5	0.01		No (a)	
Methylene chloride	5 / 87	6	0.005 - 0.015	0.005 - 0.023	L	5.29E-03	5.78E-03		5.78E-03	4.05	0.001		No (a)	
p-Isopropyltoluene	1 / 16	6	0.0044 - 0.0044	0.005 - 0.0078	L	3.13E-03	---	(j)	4.40E-03	NSV	---		Yes	
Styrene	1 / 87	1	0.002 - 0.002	0.005 - 0.011	L	3.21E-03	---	(j)	2.00E-03	300	0.000007		No (a)	
Toluene	7 / 87	8	0.0036 - 0.02	0.005 - 0.01134	L	3.58E-03	3.90E-03		3.90E-03	200	0.00002		No (a)	
Trichloroethene	1 / 87	1	0.006 - 0.006	0.005 - 0.016	L	3.83E-03	3.74E-03		3.74E-03	12.4	0.0003		No (a)	
Trichlorofluoromethane	1 / 83	1	0.007 - 0.007	0.0054 - 0.016	L	3.91E-03	4.58E-03		4.58E-03	16.4	0.0003		No (a)	

Notes:

[a] Total soil is defined as samples 0 to 3 feet below ground surface (bgs). Deeper samples were also considered total soil if at least 50% of their sampling depth interval was less than 3 ft bgs (e.g., 2 to 4 ft bgs).

[b] Statistical distribution: N = Normal distribution; L = Lognormal distribution; NP = Nonparametric distribution for those sample datasets that fail normal and lognormal distribution.

[c] The 95% upper confidence limit (UCL) calculated using bootstrapping with 5000 replications.

[d] The screening concentration used to calculate the HQ_{screen} is the 95% UCL, or the MDC if sample size is five or less.

[e] See Table 6-14.

[f] No Chemical is not chosen as a COPEC; Yes = Chemical is chosen as a COPEC.

[g] Rationale for exclusion of chemical as a COPEC:
(a) The screening concentration is less than the ESV.
(b) Chemical is an essential nutrient.

* Although the detection frequency is less than 2 or 5 percent or the hazard quotient is less than 1, chemical is selected as a COPEC because it is a TCEQ bioaccumulative compound.

[h] Nondetected samples with detection limits greater than the maximum detected concentration were not included in the calculation of the 95% UCL

[i] Analysis of chemical was performed by two different methods. Data were combined to include each sample analyzed for this chemical, irregardless of the method. The sample with the lowest detection limit was the one selected for inclusion the dataset.

[j] The 95% UCL could not be calculated because the number of samples was reduced to five or less after samples with elevated detection limits were eliminated from the dataset.

COPEC constituent of potential ecological concern
ESV ecological screening value
HQ_{screen} screening-level hazard quotient
MDC maximum detected concentration
mg/kg milligrams per kilogram
NA not applicable
NSV no screening value available
TCEQ Texas Commission on Environmental Quality

Table 6-20
Selection of Constituents of Potential Ecological Concern
Surface Water
Harrison Bayou Watershed

Chemical	Detection Frequency	Percent Hits	Range of Values, mg/L Detected Concentration Minimum - Maximum	Reporting Limits Minimum - Maximum	Statistical Distribution [a]	Mean mg/L	95% UCL mg/L [b]	Screening Concentration mg/L [c]	ESV mg/L [d]	HQ_{SCREEN}	TCEQ Bioaccumulative Compound?	COPEC? [e,f]	
Inorganics													
Aluminum	7 / 7	100	0.31 - 64	NA - NA	L	1.12E+01	2.03E+01	2.03E+01	0.09	234		Yes	
Antimony	4 / 34	12	0.00425 - 0.032	0.005 - 0.03	NP	7.11E-03	8.85E-03	8.85E-03	0.16	0.06		No (a)	
Arsenic	5 / 39	13	0.006 - 0.0255	0.005 - 0.01	NP	5.15E-03	6.31E-03	6.31E-03	0.19	0.03		No (a)	
Barium	34 / 39	87	0.05 - 1.18	0.2 - 0.2	L	2.09E-01	2.58E-01	2.58E-01	16	0.02		No (a)	
Beryllium	2 / 7	29	0.0006 - 0.0031	0.0005 - 0.0005	NP	7.07E-04	1.12E-03	1.12E-03	0.0053	0.2		No (a)	
Calcium	5 / 7	71	7.45 - 44	5 - 5	L	1.54E+01	2.23E+01	2.23E+01	Nutrient	---		No (b)	
Chloride	21 / 22	95	2.74 - 85.6	2 - 2	L	2.71E+01	3.32E+01	3.32E+01	230	0.1		No (a)	
Chromium	3 / 39	8	0.01 - 0.085	0.01 - 0.05	NP	9.95E-03	1.27E-02	1.27E-02	0.01	1.2		Yes	
Copper	8 / 27	30	0.005 - 0.1	0.005 - 0.025	NP	1.19E-02	1.69E-02	1.69E-02	0.01	2.4		Yes	
Iron	7 / 7	100	0.79 - 91.5	NA - NA	L	1.61E+01	2.91E+01	2.91E+01	1	29		Yes	
Lead	14 / 39	36	0.002 - 0.0595	0.002 - 0.02	L	5.66E-03	7.24E-03	7.24E-03	0.001	7.2		Yes	
Magnesium	3 / 7	43	8 - 59	5 - 5	L	1.33E+01	2.17E+01	2.17E+01	Nutrient	---		No (b)	
Manganese	7 / 7	100	0.167 - 1.77	NA - NA	L	6.92E-01	9.37E-01	9.37E-01	0.12	7.8		Yes	
Nickel	1 / 39	3	0.09 - 0.09	0.04 - 0.05	NP	2.32E-02	2.64E-02	2.64E-02	0.087	0.3		No (a)	
Potassium	2 / 7	29	9.1 - 15	5 - 5	NP	5.23E+00	7.38E+00	7.38E+00	Nutrient	---		No (b)	
Selenium	1 / 39	3	0.006 - 0.006	0.005 - 0.01	N	3.90E-03	4.63E-03	4.63E-03	0.005	0.9	Yes	Yes	*
Sodium	5 / 7	71	6.9 - 36	5 - 5	L	1.12E+01	1.61E+01	1.61E+01	Nutrient	---		No (b)	
Strontium	5 / 7	71	0.095 - 0.883	0.05 - 0.05	L	2.25E-01	3.52E-01	3.52E-01	1.50	0.2		No (a)	
Thallium	1 / 39	3	0.0011 - 0.0011	0.001 - 0.05	NP	5.86E-04	7.54E-04	7.54E-04	0.004	0.2	Yes	Yes	*
Vanadium	1 / 7	14	0.15 - 0.15	0.05 - 0.05	NP	4.29E-02	6.18E-02	6.18E-02	0.02	3.1		Yes	
Zinc	25 / 27	93	0.009 - 0.26	0.02 - 0.02	NP	3.19E-02	4.16E-02	4.16E-02	0.058	0.7		No (a)	
General Chemistry													
Nitrate/Nitrite	3 / 7	43	0.155 - 204	0.05 - 0.1	NP	2.93E+01	5.84E+01	5.84E+01	0.06	974		Yes	
Nitrate	10 / 15	67	0.04 - 4.74	0.01 - 0.1	L	4.32E-01	7.46E-01	7.46E-01	0.06	12		Yes	
Sulfate	20 / 22	91	4.3 - 286	1 - 2	L	4.15E+01	5.76E+01	5.76E+01	NSV	---		Yes	
Perchlorate													
Perchlorate	22 / 111	20	0.0058 - 0.905	0.004 - 0.09	NP	4.62E-02	6.33E-02	6.33E-02	0.40	0.16		No (a)	
Dioxins/Furans													
2,3,7,8-TCDD TEQ	6 / 6	100	3.32E-09 - 1.42E-08	NA - NA	L	8.00E-09	9.44E-09	9.44E-09	3.00E-12	3146	Yes	Yes	
Semivolatile Organics													
1,2,4-Trichlorobenzene	2 / 158	1	0.00041 - 0.00073	0.00032 - 0.011	NP	1.00E-03	--- g	7.30E-04	0.051	0.01		No (a)	
1,4-Dichlorobenzene	3 / 165	2	0.00017 - 0.000313	0.0002 - 0.011	NP	8.92E-04	--- g	3.13E-04	0.11	0.003		No (a)	
Hexachlorobutadiene	1 / 141	1	0.00033 - 0.00033	0.0002 - 0.011	NP	8.51E-04	--- g	3.30E-04	0.00093	0.35		No (a)	
Naphthalene	2 / 141	1	0.000258 - 0.00043	0.001 - 0.011	NP	1.04E-03	--- g	4.30E-04	0.49	0.0009		No (a)	
Volatile Organics													
1,1-Dichloroethene	5 / 186	3	0.000507 - 0.003	0.0002 - 0.005	NP	9.35E-04	1.07E-03	1.07E-03	1.5	0.0007		No (a)	
1,2-Dichloroethane	9 / 186	5	0.0005 - 0.003	0.00031 - 0.005	NP	9.50E-04	1.09E-03	1.09E-03	6.3	0.0002		No (a)	
2-Butanone	2 / 159	1	0.006 - 0.006	0.005 - 0.1	NP	8.90E-03	--- g	6.00E-03	42.4	0.0001		No (a)	
Acetone	36 / 159	23	0.00185 - 0.027	0.005 - 0.1	NP	1.08E-02	1.30E-02	1.30E-02	101.2	0.0001		No (a)	
Carbon disulfide	4 / 149	3	0.0003 - 0.0008	0.001 - 0.005	NP	1.79E-03	--- g	8.00E-04	0.105	0.01		No (a)	
Chloromethane	4 / 186	2	0.000795 - 0.00125	0.0005 - 0.01	NP	1.50E-03	--- g	1.25E-03	28	0.00004		No (a)	
cis-1,2-Dichloroethene	20 / 160	13	0.00027 - 0.0915	0.0002 - 0.005	NP	2.66E-03	3.65E-03	3.65E-03	14	0.0003		No (a)	
Methylene chloride	16 / 186	9	0.00072 - 0.01	0.00022 - 0.05	NP	2.51E-03	2.82E-03	2.82E-03	11	0.0003		No (a)	
p-Cymene	2 / 76	3	0.00098 - 0.0024	0.0002 - 0.005	NP	5.26E-04	5.99E-04	5.99E-04	0.042	0.01		No (a)	
Styrene	1 / 179	1	0.002 - 0.002	0.0002 - 0.005	NP	9.60E-04	1.10E-03	1.10E-03	1.25	0.0009		No (a)	
Tetrachloroethene	1 / 186	1	0.0009 - 0.0009	0.00025 - 0.005	NP	9.28E-04	--- g	9.00E-04	0.79	0.001		No (a)	
Toluene	6 / 186	3	0.00017 - 0.00024	0.0005 - 0.005	NP	9.22E-04	--- g	2.40E-04	1.45	0.0002		No (a)	
trans-1,2-Dichloroethene	2 / 160	1	0.000408 - 0.00121	0.00029 - 0.005	NP	6.75E-04	7.82E-04	7.82E-04	22	0.00004		No (a)	
Trichloroethene	47 / 187	25	0.00017 - 0.393	0.0005 - 0.005	NP	7.80E-03	1.11E-02	1.11E-02	0.55	0.02		No (a)	
Vinyl Chloride	7 / 186	4	0.00074 - 0.014	0.00024 - 0.01	NP	1.55E-03	1.81E-03	1.81E-03	2.82	0.0006		No (a)	

Table 6-20
Selection of Constituents of Potential Ecological Concern
Surface Water
Harrison Bayou Watershed

Notes:

[a] Statistical distribution: N = Normal distribution; L = Lognormal distribution; NP = Nonparametric distribution for those sample datasets that fail normal and lognormal distribution.

[b] The 95% upper confidence limit (UCL) calculated using bootstrapping with 5000 replications.

[c] The screening concentration used to calculate the HQ_{screen} is the 95% UCL, or the MDC if detection frequency is five or less after elimination of samples with elevated detection limits.

[d] See Table 6-15.

[e] No Chemical is not chosen as a COPEC; Yes = Chemical is chosen as a COPEC.

[f] Rationale for exclusion of chemical as a COPEC:

(a) screening concentration is less than the ESV
(b) essential nutrient
(c) detection frequency is less than 2 percent, or if 2% < FOD < 5% results of spatial evaluation demonstrate no hot spot.

[g] The 95% UCL was not calculated because either there were five or less samples (after removal of samples with elevated detection limits) or the chemical was not selected as a COPEC even when the maximum detected concentration was used.

* Although the detection frequency is less than 2 or 5 percent or the hazard quotient is less than 1, chemical is selected as a COPEC because it is a TCEQ bioaccumulative compound.

COPEC constituent of potential ecological concern
ESV ecological screening value
HQ_{screen} screening-level hazard quotient
MDC maximum detected concentration
mg/L milligrams per liter
NA not applicable
NSV no screening value available
TCEQ Texas Commission on Environmental Quality

Table 6-21
Selection of Constituents of Potential Ecological Concern
Sediment
Harrison Bayou Watershed

Chemical	Detection Frequency	Percent Hits	Range of Values, mg/kg: Detected Concentration Minimum - Maximum	Range of Values, mg/kg: Reporting Limits Minimum - Maximum	Statistical Distribution [a]	Mean mg/kg	95% UCL mg/kg [b]		Screening Concentration mg/kg [c]	ESV mg/kg [d]	HQ_{SCREEN}	TCEQ Bioaccumulative Compound?	COPEC? [e,f]	
Inorganics														
Aluminum	6 / 6	100.0	2900 - 15000	NA - NA	L	7.50E+03	1.03E+04		1.03E+04	280	37		Yes	
Arsenic	36 / 41	87.8	0.73 - 9.49	1.285 - 1.72	L	2.92E+00	3.37E+00		3.37E+00	9.79	0.3		No (a)	
Barium	41 / 41	100.0	34 - 2030	NA - NA	L	2.32E+02	2.86E+02		2.86E+02	48.0	6		Yes	
Beryllium	2 / 6	33.3	0.61 - 1.18	0.644 - 0.772	L	5.32E-01	6.87E-01		6.87E-01	73.0	0.01		No (a)	
Cadmium	1 / 41	2.4	0.183 - 0.183	0.6 - 1.72	L	1.83E-01	1.83E-01		1.83E-01	0.990	0.2	Yes	Yes	*
Calcium	5 / 6	83.3	960 - 6750	640 - 640	L	1.86E+03	2.92E+03		2.92E+03	Nutrient	---		No (b)	
Chloride	7 / 13	53.8	6 - 51.9	1 - 10	L	1.94E+01	2.78E+01		2.78E+01	NSV	---		No (c)	
Chromium	42 / 42	100.0	1.9 - 40.9	NA - NA	L	1.32E+01	1.52E+01		1.52E+01	43.4	0.4		No (a)	
Cobalt	4 / 6	66.7	6.9 - 12	6.4 - 9.79	N	7.60E+00	9.47E+00		9.47E+00	50	0.2		No (a)	
Copper	27 / 28	96.4	2.7 - 15.9	3.22 - 3.22	L	6.82E+00	7.78E+00		7.78E+00	31.6	0.2	Yes	Yes	*
Iron	6 / 6	100.0	2300 - 31000	NA - NA	L	1.33E+04	1.87E+04		1.87E+04	20000	0.9		No (a)	
Lead	41 / 41	100.0	4.58 - 68.1	NA - NA	L	1.61E+01	1.82E+01		1.82E+01	35.8	0.5		No (a)	
Magnesium	5 / 6	83.3	820 - 2800	640 - 640	L	1.26E+03	1.72E+03		1.72E+03	Nutrient	---		No (b)	
Manganese	6 / 6	100.0	20 - 563	NA - NA	N	2.75E+02	3.77E+02		3.77E+02	460	0.8		No (a)	
Mercury	4 / 42	9.5	0.03 - 0.15	0.01 0.26	NP	6.13E-02	8.29E-02		8.29E-02	0.18	0.5	Yes	Yes	*
Nickel	38 / 41	92.7	3 - 26	1.25 - 5.3	N	9.70E+00	1.10E+01		1.10E+01	22.7	0.5	Yes	Yes	*
Potassium	6 / 6	100.0	710 - 3500	0 - 0	L	1.40E+03	1.85E+03		1.85E+03	Nutrient	---		No (b)	
Selenium	12 / 41	29.3	0.1 - 3.41	0.1 - 1.84	L	7.65E-01	9.08E-01		9.08E-01	1	0.9	Yes	Yes	*
Strontium	5 / 6	83.3	15 - 36	6.4 - 6.4	N	2.07E+01	2.66E+01		2.66E+01	1700	0.02		No (a)	
Thallium	3 / 41	7.3	1.06 - 1.6	0.196 - 2.085	L	4.92E-01	6.00E-01		6.00E-01	0.044	14		Yes	
Vanadium	6 / 6	100.0	8.4 - 45.1	NA - NA	L	2.13E+01	2.87E+01		2.87E+01	30.0	0.96		No (a)	
Zinc	28 / 28	100.0	9.2 - 58	NA - NA	L	3.15E+01	3.58E+01		3.58E+01	121	0.3	Yes	Yes	*
General Chemistry														
Nitrate	5 / 13	38.5	0.185 - 2.26	0.07 - 0.13	NP	4.60E-01	7.48E-01		7.48E-01	NSV	---		Yes	
Sulfate	13 / 13	100.0	2 - 234	NA - NA	L	5.13E+01	7.51E+01		7.51E+01	NSV	---		Yes	
Dioxins/Furans														
2,3,7,8-TCDD-TEQ	5 / 5	100.0	0.000000787 - 1.41E-05	NA - NA	U	4.00E-06	---	g	1.41E-05	1.20E-07	118	Yes	Yes	
Semivolatile Organics														
bis(2-Ethylhexyl) phthalate	2 / 17	11.8	0.293 - 0.369	0.33 - 0.569	L	2.33E-01	2.82E-01		2.82E-01	0.182	1.5		Yes	
Di-n-butyl phthalate	5 / 17	29.4	2.17 - 7.44	0.33 - 0.569	NP	1.26E+00	1.82E+00		1.82E+00	240	0.01		No (a)	
Volatile Organics														
1,1-Dichloroethene	2 / 55	3.6	0.00225 - 0.0033	0.0016 - 0.037	NP	3.51E-03	---	g	3.30E-03	1.87	0.002		No (a)	
1,2-Dichloroethane	3 / 55	5.5	0.0021 - 0.012	0.0016 - 0.037	NP	3.71E-03	4.32E-03		4.32E-03	4.79	0.001		No (a)	
2-Butanone	1 / 50	2.0	0.0072 - 0.0072	0.01 - 0.1	NP	1.82E-02	2.31E-02		2.31E-02	25.71	0.001		No (a)	
Acetone	9 / 49	18.4	0.0039 - 0.146	0.01 - 0.1	NP	2.83E-02	3.49E-02		3.49E-02	60.03	0.001		No (a)	
cis-1,2-Dichloroethene	3 / 27	11.1	0.0567 - 0.19	0.0016 - 0.0098	NP	1.82E-02	2.98E-02		2.98E-02	0.4	0.1		No (a)	
Chlorobenzene	1 / 55	1.8	0.0036 - 0.0036	0.0013 - 0.037	NP	3.44E-03	4.01E-03		4.01E-03	0.17	0.02		No (a)	
Styrene	1 / 55	1.8	0.093 - 0.093	0.0013 - 0.037	NP	5.06E-03	6.71E-03		6.71E-03	10.24	0.001		No (a)	
Trichloroethene	7 / 55	12.7	0.00506 - 1.23	0.0031 - 0.037	NP	4.17E-02	6.60E-02		6.60E-02	0.84	0.1		No (a)	
Vinyl Chloride	2 / 55	3.6	0.0098 - 0.0225	0.0016 - 0.073	NP	6.92E-03	8.11E-03		8.11E-03	1.96	0.004		No (a)	

Notes:

[a] Statistical distribution: N = Normal distribution; L = Lognormal distribution; NP = Nonparametric distribution for those sample datasets that fail normal and lognormal distribution; U = Undefined if sample size is five or less after removing samples with elevated detection limits.

[b] The 95% upper confidence limit (UCL) calculated using bootstrapping with 5000 replications.

[c] The screening concentration used to calculate the HQ_{screen} is the 95% UCL, or the MDC if detection frequency is five or less after elimination of samples with elevated detection limits.

Table 6-21
Selection of Constituents of Potential Ecological Concern
Sediment
Harrison Bayou Watershed

Notes *(cont.)* :

[d] See Table 6-16.

[e] No = Chemical is not chosen as a COPEC; Yes = Chemical is chosen as a COPEC.

[f] Rationale for exclusion of chemical as a COPEC:

(a) screening concentration is less than the ESV
(b) essential nutrient
(c) no toxicological data is available for this chemical; further quantitative evaluation not possible.
(d) detection frequency is less than 2 percent, or if 2% < FOD < 5% results of spatial evaluation demonstrate no hot spot.

[g] The 95% UCL was not calculated because either there were five or less samples (after removal of samples with elevated detection limits) or the chemical was not selected as a COPEC even when the maximum detected concentration was used.

* Although the detection frequency is less than 2 or 5 percent or the hazard quotient is less than 1, chemical is selected as a COPEC because it is a TCEQ bioaccumulative compound.

COPEC constituent of potential ecological concern
ESV ecological screening value
HQ_{screen} screening-level hazard quotient
MDC maximum detected concentration
NA not applicable
NSV no screening value available
TCEQ Texas Commission on Environmental Quality
mg/kg milligrams per kilogram

Table 6-22
Selection of Constituents of Potential Concern
Surface Water
Goose Prairie Creek Watershed

Chemical	Detection Frequency	Percent Hits	Range of Values, mg/L Detected Concentration Minimum - Maximum	Reporting Limits Minimum - Maximum	Statistical Distribution [a]	Mean mg/L	95% UCL mg/L [b]		Screening Concentration mg/L [c]	ESV mg/L [d]	HQ_{SCREEN}	TCEQ Bioaccumulative Compound?	COPEC? [e,f]	
Inorganics														
Aluminum	34 / 35	97	0.27 - 11	0.2 - 0.2	L	1.73E+00	2.10E+00		2.10E+00	0.087	24		Yes	
Antimony	20 / 50	40	0.005 - 0.068	0.005 - 0.1	L	1.59E-02	2.00E-02		2.00E-02	0.16	0.1		No (a)	
Arsenic	5 / 50	10	0.0112 - 0.017	0.002 - 0.01	NP	5.22E-03	6.02E-03		6.02E-03	0.19	0.03		No (a)	
Barium	21 / 50	42	0.029 - 2.2	0.2 - 0.2	NP	1.38E-01	1.81E-01		1.81E-01	16	0.01		No (a)	
Beryllium	1 / 31	3	0.0014 - 0.0014	0.0005 - 0.0005	NP	2.87E-04	3.35E-04		3.35E-04	0.0053	0.1		No (a)	
Calcium	32 / 35	91	5.9 - 15	5 - 5	N	8.63E+00	9.36E+00		9.36E+00	Nutrient	---		No (b)	
Chloride	11 / 15	73	1.27 - 21.4	0.4 - 2	L	4.18E+00	5.68E+00		5.68E+00	230	0.02		No (a)	
Chromium	2 / 50	4	0.01 - 0.011	0.01 - 0.02	NP	5.62E-03	6.39E-03		6.39E-03	0.0106	0.6		No (a)	
Copper	4 / 41	10	0.005 - 0.044	0.005 - 0.025	NP	1.23E-02	1.42E-02		1.42E-02	0.007	2.0		Yes	
Iron	35 / 35	100	0.39 - 12	NA - NA	L	2.68E+00	3.14E+00		3.14E+00	1	3.1		Yes	
Lead	37 / 50	74	0.002 - 0.069	0.002 - 0.003	L	6.26E-03	7.76E-03		7.76E-03	0.001	7.8		Yes	
Magnesium	4 / 35	11	4.4 - 5.6	5 - 5	NP	2.80E+00	3.15E+00		3.15E+00	Nutrient	---		No (b)	
Manganese	35 / 35	100	0.019 - 1.2	NA - NA	L	2.12E-01	2.73E-01		2.73E-01	0.12	2.3		Yes	
Potassium	3 / 35	9	2.2 - 5.7	2 - 5	NP	2.55E+00	2.97E+00		2.97E+00	Nutrient	---		No (b)	
Selenium	2 / 50	4	0.0023 - 0.006	0.002 - 0.02	NP	3.23E-03	3.74E-03		3.74E-03	0.005	0.7	Yes	Yes	*
Sodium	20 / 31	65	5.1 - 12	5 - 5	NP	5.74E+00	6.53E+00		6.53E+00	Nutrient	---		No (b)	
Strontium	16 / 35	46	0.05 - 0.17	0.05 - 0.05	NP	5.43E-02	6.55E-02		6.55E-02	1.5	0.04		No (a)	
Thallium	14 / 50	28	0.0009 - 0.0031	0.001 - 0.5	NP	1.00E-03	1.70E-03		1.70E-03	0.004	0.4	Yes	Yes	*
Tin	1 / 14	7	0.11 - 0.11	0.1 - 0.1	NP	5.43E-02	6.58E-02		6.58E-02	0.073	0.9		No (a)	
Zinc	33 / 41	80	0.009 - 0.47	0.02 - 0.02	NP	6.50E-02	8.78E-02		8.78E-02	0.0581	1.5		Yes	
General Chemistry														
Nitrate/Nitrite	1 / 6	17	0.121 - 0.121	0.1 - 0.1	NP	6.18E-02	8.12E-02		8.12E-02	0.06	1.4		Yes	
Nitrate	3 / 9	33	0.0525 - 3.78	0.1 - 0.1	NP	4.70E-01	8.86E-01		8.86E-01	0.06	15		Yes	
Sulfate	14 / 15	93	1.65 - 48.8	2 - 2	L	1.10E+01	1.42E+01		1.42E+01	NSV	---		Yes	
Total Cyanide	2 / 25	8	0.01 - 0.011	0.01 - 0.01	NP	5.44E-03	6.33E-03		6.33E-03	0.0107	0.6		No (a)	
Perchlorate														
Ammonium perchlorate	6 / 18	33	0.000814 - 0.00615	0.001 - 0.004	NP	1.53E-03	1.97E-03		1.97E-03	0.40	0.005		No (a)	
Perchlorate	37 / 92	40	0.00177 - 0.0585	0.004 - 0.008	NP	5.62E-03	6.49E-03		6.49E-03	0.40	0.02		No (a)	
Nitroaromatics														
2,4,6-Trinitrotoluene	13 / 195	7	0.000116 - 0.136	0.0000194 - 0.0007	NP	2.30E-03	3.52E-03		3.52E-03	0.05	0.1		No (a)	
2,4-Dinitrotoluene	25 / 206	12	0.0000566 - 0.0079	0.00002 - 0.01	NP	3.80E-04	4.94E-04		4.94E-04	1.22	0.0004		No (a)	
2,6-Dinitrotoluene	11 / 205	5	0.0000546 - 0.0079	0.0000266 - 0.01	NP	3.65E-04	4.85E-04		4.85E-04	1.22	0.0004		No (a)	
2-amino-4,6-Dinitrotoluene	43 / 195	22	0.000075 - 0.021	0.000035 - 0.00096	NP	5.70E-04	7.41E-04		7.41E-04	0.74	0.001		No (a)	
4-amino-2,6-Dinitrotoluene	47 / 195	24	0.00006 - 0.021	0.0000434 - 0.00065	NP	8.16E-04	1.07E-03		1.07E-03	0.74	0.001		No (a)	
2-Nitrotoluene	3 / 195	2	0.0000831 - 0.0003	0.0000332 - 0.0013	NP	1.51E-04	1.70E-04		1.70E-04	0.44	0.0004		No (a)	
4-Nitrotoluene	4 / 195	2	0.000121 - 0.0017	0.0000398 - 0.0013	NP	1.44E-04	1.59E-04		1.59E-04	0.95	0.0002		No (a)	
HMX	11 / 196	6	0.000401 - 0.0132	0.0000258 - 0.0008	NP	4.04E-04	5.68E-04		5.68E-04	0.15	0.004		No (a)	
RDX	17 / 195	9	0.000529 - 0.0121	0.0000219 - 0.00084	NP	4.82E-04	6.55E-04		6.55E-04	0.18	0.004		No (a)	
Tetryl	6 / 192	3	0.0000352 - 0.000221	0.0000901 - 0.0008	NP	1.39E-04	1.54E-04		1.54E-04	5.8	0.00003		No (a)	
Dioxins/Furans														
2,3,7,8-TCDD-TEQ	10 / 10	100	3.78E-09 - 1.29E-08	NA - NA	N	7.00E-09	8.59E-09		8.59E-09	3.00E-12	2862	Yes	Yes	
Semivolatile Organics														
1,2,4-Trichlorobenzene	3 / 229	1	0.00027 - 0.0017	0.00018 - 0.01	NP	8.36E-04	9.79E-04		9.79E-04	0.051	0.02		No (a)	
1,3-Dinitrobenzene	1 / 195	1	0.0000495 - 0.0000495	0.0000168 - 0.00065	NP	1.00E-04	1.11E-04		1.11E-04	0.072	0.002		No (a)	
1,4-Dichlorobenzene	1 / 238	0.4	0.00015 - 0.00015	0.00014 - 0.01	NP	7.99E-04	---	g	1.50E-04	0.11	0.001		No (a)	
bis(2-Ethylhexyl) phthalate	4 / 53	8	0.0015 - 0.53	0.00092 - 0.01	NP	1.43E-02	2.43E-02		2.43E-02	0.007	3.5		Yes	
Diethyl phthalate	1 / 53	2	0.0026 - 0.0026	0.001 - 0.01	NP	4.02E-03	---	g	2.60E-03	1.04	0.003		No (a)	
Naphthalene	1 / 199	1	0.000324 - 0.000324	0.00015 - 0.01	NP	9.84E-04	---	g	3.24E-04	0.25	0.001		No (a)	

Table 6-22
Selection of Constituents of Potential Concern
Surface Water
Goose Prairie Creek Watershed

Chemical	Detection Frequency	Percent Hits	Range of Values, mg/L Detected Concentration Minimum - Maximum	Reporting Limits Minimum - Maximum	Statistical Distribution [a]	Mean mg/L	95% UCL mg/L [b]		Screening Concentration mg/L [c]	ESV mg/L [d]	HQ_{SCREEN}	TCEQ Bioaccumulative Compound?	COPEC? [e,f]
Volatile Organics													
1,1-Dichloroethene	1 / 238	0.4	0.0004 - 0.0004	0.0002 - 0.005	NP	7.06E-04	---	g	4.00E-04	1.5	0.0003		No (a)
1,3,5-Trinitrobenzene	2 / 195	1	0.000102 - 0.000634	0.0000549 - 0.0013	NP	1.57E-04	1.75E-04		1.75E-04	0.011	0.02		No (a)
2-Butanone	4 / 177	2	0.00211 - 0.0111	0.00081 - 0.1	NP	8.19E-03	9.97E-03		9.97E-03	42.4	0.0002		No (a)
Acetone	50 / 177	28	0.00081 - 0.0436	0.0022 - 0.02	NP	7.11E-03	7.88E-03		7.88E-03	101.2	0.0001		No (a)
Bromodichloromethane	16 / 238	7	0.00043 - 0.0048	0.00015 - 0.005	NP	7.38E-04	8.30E-04		8.30E-04	2.16	0.0004		No (a)
Carbon disulfide	2 / 177	1	0.0006 - 0.0006	0.0009 - 0.005	NP	1.43E-03	---	g	6.00E-04	0.105	0.01		No (a)
Chlorobromomethane	1 / 216	0.5	0.022 - 0.022	0.00013 - 0.005	NP	7.09E-04	8.16E-04		8.16E-04	11	0.0001		No (a)
Chloroform	35 / 238	15	0.00023 - 0.0707	0.00017 - 0.005	NP	1.31E-03	1.62E-03		1.62E-03	0.89	0.002		No (a)
cis-1,2-Dichloroethene	35 / 234	15	0.000256 - 0.054	0.00018 - 0.005	NP	1.07E-03	1.32E-03		1.32E-03	14	0.0001		No (a)
Dibromochloromethane	6 / 238	3	0.00041 - 0.00503	0.00016 - 0.005	NP	9.85E-04	1.10E-03		1.10E-03	0.129	0.01		No (a)
Methylene chloride	20 / 238	8	0.000165 - 0.003	0.00022 - 0.01	NP	1.61E-03	1.82E-03		1.82E-03	11	0.0002		No (a)
p-Cymene	2 / 120	2	0.00022 - 0.0012	0.0002 - 0.001	NP	4.67E-04	5.11E-04		5.11E-04	0.042	0.01		No (a)
Styrene	1 / 229	0.4	0.00041 - 0.00041	0.00015 - 0.005	NP	6.80E-04	---	g	4.10E-04	1.25	0.0003		No (a)
Tetrachloroethene	1 / 238	0.4	0.000223 - 0.000223	0.00021 - 0.005	NP	6.67E-04	---	g	2.23E-04	0.79	0.0003		No (a)
Toluene	19 / 238	8	0.0002 - 0.0022	0.00022 - 0.005	NP	6.97E-04	7.85E-04		7.85E-04	1.45	0.001		No (a)
trans-1,2-Dichloroethene	1 / 234	0.4	0.00043 - 0.00043	0.00029 - 0.005	NP	6.39E-04	---	g	4.30E-04	22	0.00002		No (a)
Trichloroethene	73 / 234	31	0.0002 - 0.03	0.00016 - 0.005	NP	1.73E-03	1.99E-03		1.99E-03	0.055	0.04		No (a)
Vinyl Chloride	6 / 234	3	0.0003 - 0.0087	0.00024 - 0.01	NP	7.58E-04	8.87E-04		8.87E-04	2.82	0.0003		No (a)

Notes:

[a] Statistical distribution: N = Normal distribution; L = Lognormal distribution; NP = Nonparametric distribution for those sample datasets that fail normal and lognormal distribution.

[b] The 95% upper confidence limit (UCL) calculated using bootstrapping with 5000 replications.

[c] The screening concentration used to calculate the HQ_{screen} is the 95% UCL, or the MDC if detection frequency is five or less after elimination of samples with elevated detection limits.

[d] See Table 6-15.

[e] No Chemical is not chosen as a COPEC; Yes = Chemical is chosen as a COPEC.

[f] Rationale for exclusion of chemical as a COPEC:

(a) screening concentration is less than the ESV

(b) essential nutrient

(c) detection frequency is less than 2 percent, or if 2% < FOD < 5% results of spatial evaluation demonstrate no hot spot.

[g] The 95% UCL was not calculated because either there were five or less samples (after removal of samples with elevated detection limits) or the chemical was not selected as a COPEC even when the maximum detected concentration was used.

* Although the detection frequency is less than 2 or 5 percent or the hazard quotient is less than 1, chemical is selected as a COPEC because it is a TCEQ bioaccumulative compound.

COPEC constituent of potential ecological concern
ESV ecological screening value
HQ_{screen} screening-level hazard quotient
MDC maximum detected concentration
mg/L milligrams per liter
NA not applicable
NSV no screening value available
TCEQ Texas Commission on Environmental Quality

Table 6-23
Selection of Constituents of Potential Ecological Concern
Sediment
Goose Prairie Creek Watershed

Chemical	Detection Frequency	Percent Hits	Range of Values, mg/kg Detected Concentration Minimum - Maximum	Range of Values, mg/kg Reporting Limits Minimum - Maximum	Statistical Distribution	Mean mg/kg	95% UCL mg/kg [b]		Screening Concentration mg/kg [c]	ESV mg/kg [d]	HQ_{SCREEN}	TCEQ Bioaccumulative Compound?	COPEC? [e,f]	
Inorganics														
Aluminum	53 / 53	100.0	750 - 30400	NA - NA	L	8.98E+03	1.03E+04		1.03E+04	280	37		Yes	
Antimony	1 / 51	2.0	2.2 - 2.2	1.14 - 14.8	N	3.06E+00	---	g	2.20E+00	2	1.1		No (d)	
Arsenic	66 / 69	95.7	0.36 - 21.6	1.31 - 1.37	L	4.90E+00	5.55E+00		5.55E+00	9.79	0.6		No (a)	
Barium	68 / 69	98.6	14.7 - 451	27 - 27	L	1.18E+02	1.34E+02		1.34E+02	48	2.8		Yes	
Beryllium	30 / 49	61.2	0.282 - 2.66	0.653 - 1.24	L	7.88E-01	8.84E-01		8.84E-01	73	0.01		No (a)	
Cadmium	48 / 186	25.8	0.066 - 1.03	0.619 - 1.725	NP	4.84E-01	5.24E-01		5.24E-01	0.99	0.5	Yes	Yes	*
Calcium	48 / 53	90.6	162 - 6300	650 - 1200	L	1.68E+03	1.94E+03		1.94E+03	Nutrient	---		No (b)	
Chloride	5 / 10	50.0	1.88 - 11.1	2.27 - 3.17	L	3.29E+00	4.40E+00		4.40E+00	NSV	---		No (c)	
Chromium	69 / 69	100.0	2.8 - 71	NA - NA	L	2.32E+01	2.63E+01		2.63E+01	43.4	0.6		No (a)	
Cobalt	38 / 53	71.7	2.5 - 31	1.6 - 12	L	8.25E+00	9.40E+00		9.40E+00	50	0.2		No (a)	
Copper	53 / 58	91.4	2.9 - 38.7	1.6 - 3.77	L	1.08E+01	1.27E+01		1.27E+01	31.6	0.4	Yes	Yes	*
Iron	53 / 53	100.0	1950 - 40000	NA - NA	L	1.45E+04	1.63E+04		1.63E+04	20000	0.8		No (a)	
Lead	69 / 69	100.0	2.16 - 542	NA - NA	L	5.97E+01	7.66E+01		7.66E+01	35.8	2.1		Yes	
Magnesium	37 / 53	69.8	111 - 6400	620 - 1200	L	1.06E+03	1.25E+03		1.25E+03	Nutrient	---		No (b)	
Manganese	142 / 142	100.0	17 - 1120	NA - NA	L	2.21E+02	2.44E+02		2.44E+02	460	0.5		No (a)	
Mercury	22 / 69	31.9	0.028 - 1.66	0.081 - 0.25	NP	2.09E-01	2.65E-01		2.65E-01	0.18	1.5	Yes	Yes	
Nickel	49 / 65	75.4	2.69 - 49	4.9 - 9.9	L	1.13E+01	1.30E+01		1.30E+01	22.7	0.6		No (a)	
Potassium	34 / 53	64.2	360 - 2900	162 - 1200	L	8.97E+02	1.02E+03		1.02E+03	Nutrient	---		No (b)	
Selenium	30 / 69	43.5	0.277 - 5.03	0.19 - 2.48	L	1.10E+00	1.29E+00		1.29E+00	1	1.3	Yes	Yes	
Silver	22 / 69	31.9	0.057 - 17.6	0.5 - 2.5	NP	2.05E+00	2.66E+00		2.66E+00	1	2.7		Yes	
Sodium	4 / 33	12.1	225 - 1400	131 - 1200	NP	4.20E+02	4.89E+02		4.89E+02	Nutrient	---		No (b)	
Strontium	32 / 51	62.7	7 - 82	6.2 - 12	L	1.93E+01	2.31E+01		2.31E+01	1700	0.01		No (a)	
Thallium	13 / 69	18.8	0.541 - 2.69	0.6 - 55.2	NP	6.22E-01	7.02E-01		7.02E-01	0.044	16		Yes	
Vanadium	49 / 49	100.0	7 - 77	NA - NA	L	2.65E+01	2.94E+01		2.94E+01	30	0.98		No (a)	
Zinc	58 / 58	100.0	5.6 - 570	NA - NA	L	7.78E+01	9.41E+01		9.41E+01	121	0.8	Yes	Yes	*
General Chemistry														
Sulfate	6 / 10	60.0	3.4 - 11.7	2.6 - 3.45	L	4.59E+00	6.05E+00		6.05E+00	NSV	---		Yes	
Total Cyanide	1 / 25	4.0	0.948 - 0.948	0.6255 - 1.192	NP	4.10E-01	4.91E-01		4.91E-01	0.1	4.9		No (d)	
Nitroaromatics														
2,4,6-Trinitrotoluene	3 / 71	4.2	3.8 - 121	0.1 - 2.78	NP	2.05E+00	3.74E+00		3.74E+00	0.092	41		No (d)	
2-amino-4,6-Dinitrotoluene	2 / 67	3.0	4.27 - 22.5	0.05 - 2.78	NP	6.31E-01	9.58E-01		9.58E-01	7	0.1		No (a)	
4-amino-2,6-Dinitrotoluene	2 / 71	2.8	1.35 - 8.24	0.05 - 2.78	NP	3.77E-01	4.99E-01		4.99E-01	1.4	0.4		No (a)	
Dioxins/Furans														
2,3,7,8-TCDD TEQ	11 / 11	100.0	3.78E-07 - 0.00000225	NA - NA	L	1.27E-06	1.56E-06		1.56E-06	1.20E-07	13	Yes	Yes	
Polychlorinated Biphenyls (PCBs)														
Aroclor 1254	4 / 41	9.8	0.024 - 0.28	0.035 - 0.258	NP	4.20E-02	5.10E-02		5.10E-02	0.06	0.9	Yes	Yes	*
Organochlorine Pesticides														
4,4'-DDD	2 / 43	4.7	0.0027 - 0.00655	0.002 - 0.0111	L	2.56E-03	2.97E-03		2.97E-03	0.00488	0.6	Yes	Yes	*
4,4'-DDT	3 / 43	7.0	0.003 - 0.00745	0.002 - 0.0111	L	2.61E-03	3.04E-03		3.04E-03	0.00416	0.7	Yes	Yes	
Dieldrin	1 / 43	2.3	0.00705 - 0.00705	0.002 - 0.0111	L	2.57E-03	3.00E-03		3.00E-03	0.0019	1.6	Yes	Yes	
Semivolatile Organics														
Acenaphthylene	1 / 60	1.7	0.0943 - 0.0943	0.067 - 5.7	NP	4.00E-01	---	g	9.43E-02	0.0059	16		No (d)	
Anthracene	1 / 60	1.7	1.44 - 1.44	0.067 - 5.7	NP	4.22E-01	5.73E-01		5.73E-01	0.0572	10		No (d)	
Benzo(a)anthracene	1 / 60	1.7	2.98 - 2.98	0.067 - 5.7	NP	4.48E-01	6.11E-01		6.11E-01	0.108	5.7		No (d)	
Benzo(a)pyrene	1 / 60	1.7	2.59 - 2.59	0.067 - 2.8	NP	2.82E-01	3.82E-01		3.82E-01	0.15	2.5		No (d)	
Benzo(b)fluoranthene	1 / 60	1.7	3.02 - 3.02	0.067 - 5.7	NP	4.48E-01	6.13E-01		6.13E-01	4	0.2		No (a)	
Benzo(g,h,i)perylene	1 / 60	1.7	2.72 - 2.72	0.067 - 5.7	NP	4.43E-01	6.07E-01		6.07E-01	0.17	3.6		No (d)	
Benzo(k)fluoranthene	1 / 60	1.7	1.09 - 1.09	0.067 - 5.7	NP	4.16E-01	5.71E-01		5.71E-01	0.24	2.4		No (d)	
Chrysene	1 / 60	1.7	2.87 - 2.87	0.067 - 5.7	NP	4.46E-01	6.08E-01		6.08E-01	0.166	3.7		No (d)	

Table 6-23
Selection of Constituents of Potential Ecological Concern
Sediment
Goose Prairie Creek Watershed

Chemical	Detection Frequency	Percent Hits	Range of Values, mg/kg: Detected Concentration Minimum - Maximum	Reporting Limits Minimum - Maximum	Statistical Distribution	Mean mg/kg	95% UCL mg/kg [b]		Screening Concentration mg/kg [c]	ESV mg/kg [d]	HQ_{SCREEN}	TCEQ Bioaccumulative Compound?	COPEC? [e,f]
Di-n-butyl phthalate	5 / 60	8.3	0.549 - 7.8	0.17 - 5.7	NP	7.85E-01	1.07E+00		1.07E+00	240	0.004		No (a)
Dibenzofuran	1 / 60	1.7	0.0781 - 0.0781	0.17 - 5.7	NP	4.32E-01	---	g	7.81E-02	0.42	0.2		No (a)
Fluoranthene	1 / 60	1.7	5.93 - 5.93	0.067 - 5.7	NP	4.97E-01	6.72E-01		6.72E-01	0.423	1.6		No (d)
Fluorene	1 / 60	1.7	0.453 - 0.453	0.067 - 5.7	NP	4.06E-01	---	g	4.53E-01	0.0774	5.9		No (d)
m-Cresol	1 / 26	3.8	0.0832 - 0.0832	0.17 - 0.945	N	2.16E-01	---	g	8.32E-02	0.0524	1.6		No (d)
Naphthalene	1 / 69	1.4	0.0085 - 0.0085	0.002 - 0.5695	NP	4.86E-02	---	g	8.50E-03	0.176	0.05		No (a)
p-Cresol	1 / 60	1.7	0.0832 - 0.0832	0.17 - 5.7	NP	4.32E-01	---	g	8.32E-02	0.0202	4.1		No (d)
p-Cymene	3 / 39	7.7	0.0043 - 0.0412	0.0011 - 0.012	NP	4.59E-03	5.71E-03		5.71E-03	1	0.01		No (a)
Phenanthrene	2 / 60	3.3	0.0589 - 4.67	0.067 - 5.7	NP	4.75E-01	6.64E-01		6.64E-01	0.204	3.3		No (d)
Phenol	2 / 60	3.3	0.0426 - 0.0662	0.17 - 5.7	NP	4.30E-01	---	g	6.62E-02	0.032	2.1		No (d)
Pyrene	1 / 60	1.7	5.08 - 5.08	0.067 - 5.7	NP	4.83E-01	6.85E-01		6.85E-01	0.195	3.5		No (d)
Volatile Organics													
1,1-Dichloroethene	1 / 71	1.4	0.0012 - 0.0012	0.0012 - 0.012	NP	3.14E-03	---	g	1.20E-03	1.87	0.001		No (a)
2-Butanone	4 / 63	6.3	0.0016 - 0.0148	0.011 - 0.222	L	2.33E-02	---	g	1.48E-02	25.71	0.001		No (a)
Acetone	26 / 65	40.0	0.0017 - 1.35	0.011 - 0.049	NP	1.07E-01	1.43E-01		1.43E-01	60.03	0.002		No (a)
Carbon disulfide	17 / 63	27.0	0.0017 - 0.0599	0.0057 - 0.012	NP	7.93E-03	9.88E-03		9.88E-03	0.12	0.1		No (a)
cis-1,2-Dichloroethene	3 / 67	4.5	0.0077 - 0.115	0.0012 - 0.012	NP	6.21E-03	8.74E-03		8.74E-03	0.4	0.02		No (a)
Ethylbenzene	1 / 71	1.4	0.00353 - 0.00353	0.0011 - 0.012	NP	3.14E-03	---	g	3.53E-03	2.86	0.001		No (a)
Methylene chloride	7 / 71	9.9	0.0015 - 0.008	0.0011 - 0.0555	NP	5.36E-03	6.44E-03		6.44E-03	7.75	0.001		No (a)
Toluene	2 / 71	2.8	0.0036 - 0.031	0.0011 - 0.012	NP	3.56E-03	4.09E-03		4.09E-03	2.88	0.001		No (a)
Trichloroethene	6 / 71	8.5	0.0026 - 0.0379	0.002 - 0.025	L	5.62E-03	6.62E-03		6.62E-03	0.84	0.008		No (a)
Trichlorofluoromethane	2 / 71	2.8	0.00321 - 0.0107	0.0011 - 0.025	N	5.11E-03	5.92E-03		5.92E-03	1.69	0.004		No (a)
Vinyl Chloride	1 / 71	1.4	0.0668 - 0.0668	0.0012 - 0.025	NP	6.32E-03	7.35E-03		7.35E-03	1.96	0.004		No (a)

Notes:
[a] Statistical distribution: N = Normal distribution; L = Lognormal distribution; NP = Nonparametric distribution for those sample datasets that fail normal and lognormal distribution.
[b] The 95% upper confidence limit (UCL) calculated using bootstrapping with 5000 replications.
[c] The screening concentration used to calculate the HQ_{screen} is the 95% UCL, or the MDC if detection frequency is five or less after elimination of samples with elevated detection limits.
[d] See Table 6-16.
[e] No = Chemical is not chosen as a COPEC; Yes = Chemical is chosen as a COPEC.
[f] Rationale for exclusion of chemical as a COPEC:
(a) screening concentration is less than the ESV
(b) essential nutrient
(c) no toxicological data is available for this chemical; further quantitative evaluation not possible.
(d) detection frequency is less than 2 percent, or if 2% < FOD < 5% results of spatial evaluation demonstrate no hot spot.
[g] The 95% UCL was not calculated because either there were five or less samples (after removal of samples with elevated detection limits) or the chemical was not selected as a COPEC even when the maximum detected concentration was used.
* Although the detection frequency is less than 2 or 5 percent or the hazard quotient is less than 1, chemical is selected as a COPEC because it is a TCEQ bioaccumulative compound.
COPEC constituent of potential ecological concern
ESV ecological screening value
HQ_{screen} screening-level hazard quotient
MDC maximum detected concentration
NA not applicable
NSV no screening value available
TCEQ Texas Commission on Environmental Quality
mg/kg milligrams per kilogram

Table 6-24
Selection of Constituents of Potential Ecological Concern
Surface Water
Central Creek Watershed

Chemical	Detection Frequency	Percent Hits	Range of Values, mg/L Detected Concentration Minimum - Maximum	Reporting Limits Minimum - Maximum	Statistical Distribution [a]	Mean mg/L	95% UCL mg/L [b]	Screening Concentration mg/L [c]	ESV mg/L [d]	HQ_{SCREEN}	TCEQ Bioaccumulative Compound?	COPEC? [e,f]
Inorganics												
Aluminum	9 / 9	100	0.4 - 17.9	NA - NA	L	4.16E+00	6.11E+00	6.11E+00	0.087	70		Yes
Antimony	2 / 34	6	0.00425 - 0.019	0.005 - 0.03	NP	8.26E-03	1.05E-02	1.05E-02	0.16	0.07		No (a)
Arsenic	3 / 37	8	0.01 - 0.0133	0.005 - 0.01	NP	4.58E-03	5.36E-03	5.36E-03	0.19	0.03		No (a)
Barium	30 / 37	81	0.049 - 0.375	0.2 - 0.2	L	1.24E-01	1.40E-01	1.40E-01	16	0.01		No (a)
Beryllium	3 / 9	33	0.000475 - 0.00135	0.0005 - 0.0005	NP	4.47E-04	5.71E-04	5.71E-04	0.0053	0.1		No (a)
Cadmium	2 / 37	5	0.0007 - 0.00574	0.0008 - 0.005	NP	2.09E-03	2.49E-03	2.49E-03	0.0006	4.1		Yes
Calcium	3 / 9	33	7.5 - 11	5 - 5	NP	4.77E+00	6.38E+00	6.38E+00	Nutrient	---		No (b)
Chloride	17 / 22	77	0.819 - 9.98	2 - 2	L	2.57E+00	3.13E+00	3.13E+00	230	0.01		No (a)
Chromium	1 / 37	3	0.0175 - 0.0175	0.01 - 0.05	NP	6.42E-03	8.03E-03	8.03E-03	0.0106	0.8		No (a)
Copper	6 / 20	30	0.007 - 0.028	0.005 - 0.025	NP	9.31E-03	1.18E-02	1.18E-02	0.007	1.7		Yes
Iron	9 / 9	100	0.31 - 15.9	NA - NA	L	4.18E+00	5.98E+00	5.98E+00	1	6.0		Yes
Lead	17 / 37	46	0.00164 - 0.034	0.002 - 0.04	NP	4.09E-03	5.18E-03	5.18E-03	0.001	5.2		Yes
Manganese	9 / 9	100	0.073 - 1.17	NA - NA	L	3.17E-01	4.54E-01	4.54E-01	0.12	3.8		Yes
Sodium	1 / 9	11	7.6 - 7.6	5 - 5	NP	3.07E+00	3.86E+00	3.86E+00	Nutrient	---		No (b)
Strontium	2 / 9	22	0.0475 - 0.07	0.05 - 0.05	NP	3.25E-02	3.94E-02	3.94E-02	1.5	0.03		No (a)
Vanadium	1 / 9	11	0.0375 - 0.0375	0.05 - 0.05	NP	2.64E-02	3.33E-02	3.33E-02	0.02	1.7		Yes
Zinc	15 / 20	75	0.004 - 0.1	0.02 - 0.02	L	2.28E-02	2.85E-02	2.85E-02	0.0581	0.5		No (a)
General Chemistry												
Nitrate/Nitrite	1 / 8	13	0.094 - 0.094	0.1 - 0.1	NP	5.55E-02	7.06E-02	7.06E-02	0.06	1.2		Yes
Nitrate (as N)	4 / 14	29	0.13 - 5.47	0.05 - 0.1	NP	4.79E-01	8.67E-01	8.67E-01	0.06	14		Yes
Sulfate	19 / 22	86	2.1 - 14.9	1 - 2	L	5.14E+00	6.09E+00	6.09E+00	NSV	---		Yes
Nitroaromatics												
2-Nitrotoluene	1 / 37	3	0.0013 - 0.0013	0.0001 - 0.0004	NP	1.82E-04	2.19E-04	2.19E-04	0.44	0.0005		No (a)
Dioxins/Furans												
2,3,7,8-TCDD TEQ	4 / 4	100	7.4E-09 - 1.22E-08	NA - NA	U	1.07E-08	--- g	1.22E-08	3.00E-12	4067	Yes	Yes
Semivolatile Organics												
1,3-Dinitrobenzene	1 / 37	3	0.00064 - 0.00064	0.0001 - 0.0002	NP	8.90E-05	1.07E-04	1.07E-04	0.072	0.001		No (a)
Volatile Organics												
Acetone	2 / 34	6	0.01 - 0.014	0.005 - 0.1	NP	7.40E-03	1.06E-02	1.06E-02	101.2	0.0001		No (a)
Methylene chloride	2 / 34	6	0.01 - 0.017	0.001 - 0.01	NP	3.28E-03	4.07E-03	4.07E-03	11	0.0004		No (a)

Notes:

[a] Statistical distribution: L = Lognormal distribution; NP = Nonparametric distribution for those sample datasets that fail normal and lognormal distribution; U = Undefined if sample size is five or less after removing samples with elevated detection limits.

[b] The 95% upper confidence limit (UCL) calculated using bootstrapping with 5000 replications.

[c] The screening concentration used to calculate the HQ_{screen} is the 95% UCL, or the MDC if detection frequency is five or less after elimination of samples with elevated detection limits.

[d] See Table 6-15.

[e] No Chemical is not chosen as a COPEC; Yes = Chemical is chosen as a COPEC.

[f] Rationale for exclusion of chemical as a COPEC:

(a) screening concentration is less than the ESV

(b) essential nutrient

(c) detection frequency is less than 2 percent, or if 2% < FOD < 5% results of spatial evaluation demonstrate no hot spot.

[g] The 95% UCL was not calculated because either there were five or less samples (after removal of samples with elevated detection limits) or the chemical was not selected as a COPEC even when the maximum detected concentration was used.

COPEC constituent of potential ecological concern
ESV ecological screening value
HQ_{screen} screening-level hazard quotient
MDC maximum detected concentration
mg/L milligrams per liter
NA not applicable
NSV no screening value available
TCEQ Texas Commission on Environmental Quality

Table 6-25
Selection of Constituents of Potential Ecological Concern
Sediment
Central Creek Watershed

Chemical	Detection Frequency	Percent Hits	Range of Values, mg/kg: Detected Concentration Minimum - Maximum	Range of Values, mg/kg: Reporting Limits Minimum - Maximum	Statistical Distribution [a]	Mean mg/kg	95% UCL mg/kg [b]	Screening Concentration mg/kg [c]	ESV mg/kg [d]	HQ_{SCREEN}	TCEQ Bioaccumulative Compound?	COPEC? [e,f]	
Inorganics													
Aluminum	21 / 21	100.0	1350 - 17500	NA - NA	L	8.09E+03	9.69E+03	9.69E+03	280	35		Yes	
Arsenic	44 / 50	88.0	1.01 - 15	0.67 - 2.38	L	3.99E+00	4.73E+00	4.73E+00	9.79	0.5		No (a)	
Barium	50 / 50	100.0	18.6 - 384	NA - NA	L	1.18E+02	1.32E+02	1.32E+02	48.0	2.8		Yes	
Beryllium	12 / 21	57.1	0.645 - 1.5	0.6635 - 0.986	N	7.85E-01	9.17E-01	9.17E-01	73.0	0.01		No (a)	
Cadmium	10 / 50	20.0	0.051 - 6.27	0.1 - 2.38	NP	4.57E-01	5.48E-01	5.48E-01	0.99	0.6	Yes	Yes	*
Calcium	16 / 21	76.2	950 - 2650	665 - 990	N	1.41E+03	1.65E+03	1.65E+03	Nutrient	---		No (b)	
Chloride	4 / 14	28.6	6.9 - 137	1 - 10	NP	1.28E+01	2.25E+01	2.25E+01	NSV	---		No (c)	
Chromium	50 / 50	100.0	3.47 - 48.8	NA - NA	L	1.43E+01	1.62E+01	1.62E+01	43.4	0.4		No (a)	
Cobalt	13 / 21	61.9	5.05 - 27.8	6.8 - 9.9	L	9.38E+00	1.11E+01	1.11E+01	50	0.2		No (a)	
Copper	30 / 36	83.3	1.3 - 16.7	3.315 - 4.93	L	6.17E+00	7.20E+00	7.20E+00	31.6	0.2	Yes	Yes	*
Iron	21 / 21	100.0	2200 - 19700	NA - NA	N	1.05E+04	1.23E+04	1.23E+04	20000	0.6		No (a)	
Lead	50 / 50	100.0	4 - 44.7	NA - NA	L	1.46E+01	1.61E+01	1.61E+01	35.8	0.5		No (a)	
Magnesium	13 / 21	61.9	691 - 1540	665 - 990	N	8.84E+02	1.04E+03	1.04E+03	Nutrient	---		No (b)	
Manganese	21 / 21	100.0	71.8 - 413	NA - NA	N	2.51E+02	2.72E+02	2.72E+02	460	0.6		No (a)	
Mercury	13 / 50	26.0	0.02 - 0.231	0.12 - 0.24	NP	8.35E-02	9.58E-02	9.58E-02	0.18	0.5	Yes	Yes	*
Nickel	42 / 50	84.0	2.4 - 23.1	5.3 - 7.9	L	8.12E+00	9.33E+00	9.33E+00	22.7	0.4	Yes	Yes	*
Potassium	13 / 21	61.9	611 - 1400	665 - 990	N	7.45E+02	8.64E+02	8.64E+02	Nutrient	---		No (b)	
Selenium	14 / 50	28.0	0.3 - 2.31	0.5 - 2.38	L	7.51E-01	8.67E-01	8.67E-01	1	0.9	Yes	Yes	*
Strontium	14 / 21	66.7	7.6 - 50.7	6.65 - 9.9	N	2.28E+01	2.82E+01	2.82E+01	1700	0.02		No (a)	
Thallium	3 / 50	6.0	0.519 - 4.11	0.2 - 1.61	NP	6.14E-01	7.12E-01	7.12E-01	0.044	16		Yes	
Vanadium	18 / 21	85.7	11 - 33.4	6.65 - 9.9	N	1.81E+01	2.08E+01	2.08E+01	30.0	0.7		No (a)	
Zinc	36 / 36	100.0	5.1 - 82.4	NA - NA	L	3.22E+01	3.82E+01	3.82E+01	121	0.3	Yes	Yes	*
General Chemistry													
Nitrate (as N)	1 / 14	7.1	0.5 - 0.5	0.07 - 0.16	NP	9.50E-02	1.30E-01	1.30E-01	NSV	---		Yes	
Sulfate	12 / 14	85.7	3.35 - 88.6	1 - 1.1	L	1.39E+01	2.00E+01	2.00E+01	NSV	---		Yes	
Dioxins/Furans													
2,3,7,8-TCDD-TEQ	7 / 7	100.0	0.00000115 - 0.0000138	NA - NA	L	5.59E-06	8.87E-06	8.87E-06	1.20E-07	74	Yes	Yes	
Semivolatile Organics													
bis(2-Ethylhexyl) phthalate	1 / 31	3.2	1.16 - 1.16	0.17 - 0.786	L	2.44E-01	2.93E-01	2.93E-01	0.182	1.6		No (d)	
Butyl benzyl phthalate	1 / 31	3.2	0.58 - 0.58	0.17 - 0.85	L	2.33E-01	2.82E-01	2.82E-01	1.97	0.1		No (a)	
Di-n-butyl phthalate	6 / 31	19.4	0.738 - 4.3	0.17 - 0.85	L	5.25E-01	6.95E-01	6.95E-01	240	0.003		No (a)	
Fluoranthene	1 / 31	3.2	0.275 - 0.275	0.067 - 0.786	N	1.76E-01	2.17E-01	2.17E-01	0.423	0.5		No (a)	
Pyrene	1 / 31	3.2	0.275 - 0.275	0.067 - 0.786	N	1.76E-01	2.17E-01	2.17E-01	0.195	1.1		No (d)	
Volatile Organics													
2-Butanone	2 / 48	4.2	0.0097 - 0.0185	0.01 - 0.452	NP	3.61E-02	--- [g]	1.85E-02	25.71	0.001		No (a)	
Acetone	22 / 48	45.8	0.0036 - 1.24	0.01 - 0.1	NP	1.62E-01	2.23E-01	2.23E-01	60.03	0.004		No (a)	
Carbon disulfide	12 / 48	25.0	0.00508 - 0.061	0.005 - 0.034	NP	9.48E-03	1.22E-02	1.22E-02	0.12	0.1		No (a)	
Isobutanol	1 / 9	11.1	0.061 - 0.061	1.3 - 2	NP	6.10E-02	--- [g]	6.10E-02	NSV	---		Yes	
Isopropylbenzene	1 / 9	11.1	0.00663 - 0.00663	0.0068 - 0.0098	L	4.20E-03	5.24E-03	5.24E-03	8.99	0.001		No (a)	
Methylene chloride	1 / 48	2.1	0.00383 - 0.00383	0.005 - 0.113	NP	1.12E-02	--- [g]	3.83E-03	7.75	0.0005		No (a)	
p-Cymene	3 / 9	33.3	0.00413 - 0.048	0.0068 - 0.0098	NP	8.80E-03	1.38E-02	1.38E-02	1	0.01		No (a)	
Toluene	3 / 48	6.3	0.0076 - 0.0276	0.002 - 0.034	NP	4.92E-03	6.03E-03	6.03E-03	2.88	0.002		No (a)	
Trichloroethene	1 / 48	2.1	0.0012 - 0.0012	0.002 - 0.034	L	4.94E-03	--- [g]	1.20E-03	0.84	0.001		No (a)	

Notes:

[a] Statistical distribution: N = Normal distribution; L = Lognormal distribution; NP = Nonparametric distribution for those sample datasets that fail normal and lognormal distribution.

[b] The 95% upper confidence limit (UCL) calculated using bootstrapping with 5000 replications.

Table 6-25
Selection of Constituents of Potential Ecological Concern
Sediment
Central Creek Watershed

[c] The screening concentration used to calculate the HQ_{screen} is the 95% UCL, or the MDC if detection frequency is five or less after elimination of samples with elevated detection limits.

[d] See Table 6-16.

[e] No = Chemical is not chosen as a COPEC; Yes = Chemical is chosen as a COPEC.

[f] Rationale for exclusion of chemical as a COPEC:

(a) screening concentration is less than the ESV
(b) essential nutrient
(c) no toxicological data is available for this chemical; further quantitative evaluation not possible.
(d) detection frequency is less than 2 percent, or if 2% < FOD < 5% results of spatial evaluation demonstrate no hot spot.

[g] The 95% UCL was not calculated because either there were five or less samples (after removal of samples with elevated detection limits) or the chemical was not selected as a COPEC even when the maximum detected concentration was used.

* Although the detection frequency is less than 2 or 5 percent or the hazard quotient is less than 1, chemical is selected as a COPEC because it is a TCEQ bioaccumulative compound.

COPEC constituent of potential ecological concern
ESV ecological screening value
HQ_{screen} screening-level hazard quotient
MDC maximum detected concentration
NA not applicable
NSV no screening value available
TCEQ Texas Commission on Environmental Quality
mg/kg milligrams per kilogram

Table 6-26
Selection of Constituents of Potential Ecological Concern
Surface Water
Saunders Branch Watershed

Chemical	Detection Frequency	Percent Hits	Range of Values, mg/L: Detected Concentration Minimum - Maximum	Range of Values, mg/L: Reporting Limits Minimum - Maximum	Statistical Distribution [a]	Mean mg/L	95% UCL mg/L [b]		Screening Concentration mg/L [c]	ESV mg/L [d]	HQ_{SCREEN}	TCEQ Bioaccumulative Compound?	COPEC? [e,f]
Inorganics													
Barium	8 / 8	100	5.00E-02 - 4.30E-01	NA - NA	L	1.84E-01	2.61E-01		2.61E-01	16	0.02		No (a)
Chloride	4 / 4	100	2.60E+00 - 9.70E+00	NA - NA	U	6.15E+00	---	g	9.70E+00	230	0.04		No (a)
Copper	1 / 4	25	6.00E-03 - 6.00E-03	0.005 - 0.005	U	3.38E-03	---	g	6.00E-03	0.007	0.9		No (a)
Lead	1 / 8	12.5	3.00E-03 - 3.00E-03	0.002 - 0.01	U	2.00E-03	---		3.00E-03	0.001	3		Yes
Zinc	4 / 4	100	9.00E-03 - 5.20E-02	NA - NA	U	2.46E-02	---	g	5.20E-02	0.06	0.9		No (a)
General Chemistry													
Nitrate	2 / 4	50	3.00E-02 - 9.00E-02	0.01 - 0.01	U	3.25E-02	---	g	9.00E-02	0.06	1.5		Yes
Sulfate	3 / 4	75	2.00E+00 - 5.00E+00	1 - 1	U	2.88E+00	---	g	5.00E+00	NSV	---		Yes
Volatile Organics													
Acetone	1 / 8	12.5	1.10E-02 - 1.10E-02	0.01 - 0.1	NP	2.83E-02	---		1.10E-02	101.2	0.0001		No (a)

Notes:

[a] Statistical distribution: L = Lognormal distribution; NP = Nonparametric distribution for those sample datasets that fail normal and lognormal distribution; U = Undefined if sample size is five or less after removing samples with elevated detection limits.

[b] The 95% upper confidence limit (UCL) calculated using bootstrapping with 5000 replications.

[c] The screening concentration used to calculate the HQ_{screen} is the 95% UCL, or the MDC if detection frequency is five or less after elimination of samples with elevated detection limits.

[d] See Table 6-15.

[e] No Chemical is not chosen as a COPEC; Yes = Chemical is chosen as a COPEC.

[f] Rationale for exclusion of chemical as a COPEC:
- (a) screening concentration is less than the ESV
- (b) essential nutrient
- (c) detection frequency is less than 2 percent, or if 2% < FOD < 5% results of spatial evaluation demonstrate no hot spot.

[g] The 95% UCL was not calculated because either there were five or less samples (after removal of samples with elevated detection limits) or the chemical was not selected as a COPEC even when the maximum detected concentration was used.

COPEC constituent of potential ecological concern
ESV ecological screening value
HQ_{screen} screening-level hazard quotient
MDC maximum detected concentration
mg/L milligrams per liter
NA not applicable
NSV no screening value available
TCEQ Texas Commission on Environmental Quality

Table 6-27
Selection of Constituents of Potential Ecological Concern
Sediment
Saunders Branch Watershed

Chemical	Detection Frequency	Percent Hits	Range of Values, mg/kg: Detected Concentration Minimum - Maximum	Range of Values, mg/kg: Reporting Limits Minimum - Maximum	Statistical Distribution [a]	Mean mg/kg	95% UCL mg/kg [b]	Screening Concentration mg/kg [c]	ESV mg/kg [d]	HQ_{SCREEN}	TCEQ Bioaccumulative Compound?	COPEC? [e,f]
Inorganics												
Aluminum	4 / 4	100.0	9330 - 16300	NA - NA	U	1.18E+04	--- g	1.63E+04	280	58		Yes
Arsenic	14 / 14	100.0	0.7 - 10.2	NA - NA	L	3.40E+00	4.19E+00	4.19E+00	9.79	0.4		No (a)
Barium	15 / 15	100.0	23.3 - 268	NA - NA	L	1.24E+02	1.60E+02	1.60E+02	48.0	3.3		Yes
Beryllium	4 / 4	100.0	0.993 - 1.33	NA - NA	U	1.14E+00	--- g	1.33E+00	73.0	0.02		No (a)
Cadmium	3 / 14	21.4	0.151 - 0.256	0.1 - 1.18	U	1.62E-01	2.14E-01	2.14E-01	0.99	0.2	Yes	Yes *
Calcium	4 / 4	100.0	855 - 2340	NA - NA	U	1.75E+03	--- g	2.34E+03	Nutrient	---		No (b)
Chloride	2 / 6	33.3	44 - 89	10 - 10	NP	2.55E+01	3.97E+01	3.97E+01	NSV	---		No (c)
Chromium	13 / 14	92.9	2.4 - 40.2	1 - 1	L	1.07E+01	1.36E+01	1.36E+01	43.4	0.3		No (a)
Cobalt	4 / 4	100.0	8.87 - 13.7	NA - NA	U	1.15E+01	--- g	1.37E+01	50	0.3		No (a)
Copper	8 / 8	100.0	4.1 - 16.2	NA - NA	L	8.76E+00	1.07E+01	1.07E+01	31.6	0.3	Yes	Yes *
Iron	4 / 4	100.0	8640 - 14900	NA - NA	U	1.22E+04	--- g	1.49E+04	20000	0.7		No (a)
Lead	14 / 15	93.3	4 - 27.6	1 - 1	N	1.18E+01	1.48E+01	1.48E+01	35.8	0.4		No (a)
Magnesium	4 / 4	100.0	872 - 1220	NA - NA	U	9.92E+02	--- g	1.22E+03	Nutrient	---		No (b)
Manganese	4 / 4	100.0	155 - 488	NA - NA	U	3.46E+02	--- g	4.88E+02	460	1.1		Yes
Mercury	9 / 14	64.3	0.01 - 0.149	0.01 - 0.2	L	5.78E-02	8.01E-02	8.01E-02	0.18	0.4	Yes	Yes *
Nickel	13 / 14	92.9	2.1 - 17.1	1 - 1	N	8.62E+00	1.10E+01	1.10E+01	22.7	0.5	Yes	Yes *
Potassium	4 / 4	100.0	803 - 1330	NA - NA	U	9.93E+02	--- g	1.33E+03	Nutrient	---		No (b)
Selenium	8 / 15	53.3	0.1 - 1.73	0.1 - 2	L	6.32E-01	8.74E-01	8.74E-01	1	0.9	Yes	Yes *
Strontium	4 / 4	100.0	19.5 - 42.5	NA - NA	U	3.40E+01	--- g	4.25E+01	1700	0.03		No (a)
Vanadium	4 / 4	100.0	20.4 - 30.8	NA - NA	U	2.60E+01	--- g	3.08E+01	30.0	1.03		Yes
Zinc	8 / 8	100.0	13.3 - 60.4	NA - NA	N	4.30E+01	5.15E+01	5.15E+01	121	0.4	Yes	Yes *
General Chemistry												
Nitrate	2 / 6	33.3	1.01 - 2.36	0.1 - 0.1	NP	5.95E-01	9.88E-01	9.88E-01	NSV	---		Yes
Sulfate	5 / 6	83.3	30 - 30	10 - 10	NP	2.58E+01	3.00E+01	3.00E+01	NSV	---		Yes
Dioxins/Furans												
2,3,7,8-TCDD TEQ	1 / 1	100.0	6.98E-06 - 6.98E-06	NA - NA	U	6.98E-06	--- g	6.98E-06	1.20E-07	58	Yes	Yes
Semivolatile Organics												
bis(2-Ethylhexyl) phthalate	2 / 10	20.0	0.434 - 0.443	0.17 - 6.55	L	2.27E-01	3.06E-01 g	3.06E-01	0.18	1.7		Yes
Di-n-butyl phthalate	4 / 10	40.0	0.384 - 1.76	0.17 - 6.55	L	7.67E-01	1.20E+00	1.20E+00	240	0.01		No (a)
Volatile Organics												
Acetone	6 / 14	42.9	0.031 - 1.08	0.0155 - 0.1	L	1.89E-01	2.83E-01	2.83E-01	60.03	0.005		No (a)
Carbon disulfide	4 / 14	28.6	0.00473 - 0.177	0.005 - 0.01	NP	1.71E-02	2.95E-02	2.95E-02	0.12	0.2		No (a)
Toluene	1 / 14	7.1	0.029 - 0.029	0.002 - 0.0161	L	5.33E-03	7.51E-03	7.51E-03	2.88	0.003		No (a)

Notes:

[a] Statistical distribution: N = Normal distribution; L = Lognormal distribution; NP = Nonparametric distribution for those sample datasets that fail normal and lognormal distribution; U = Undefined if sample size is five or less after removing samples with elevated detection limits.

[b] The 95% upper confidence limit (UCL) calculated using bootstrapping with 5000 replications.

[c] The screening concentration used to calculate the HQ_{screen} is the 95% UCL, or the MDC if detection frequency is five or less after elimination of samples with elevated detection limits.

[d] See Table 6-16.

[e] No = Chemical is not chosen as a COPEC; Yes = Chemical is chosen as a COPEC.

[f] Rationale for exclusion of chemical as a COPEC:

- (a) screening concentration is less than the ESV
- (b) essential nutrient
- (c) no toxicological data is available for this chemical; further quantitative evaluation not possible.
- (d) detection frequency is less than 2 percent, or if 2% < FOD < 5% results of spatial evaluation demonstrate no hot spot.

[g] The 95% UCL was not calculated because either there were five or less samples (after removal of samples with elevated detection limits) or the chemical was not selected as a COPEC even when the maximum detected concentration was used.

* Although the detection frequency is less than 2 or 5 percent or the hazard quotient is less than 1, chemical is selected as a COPEC because it is a TCEQ bioaccumulative compound

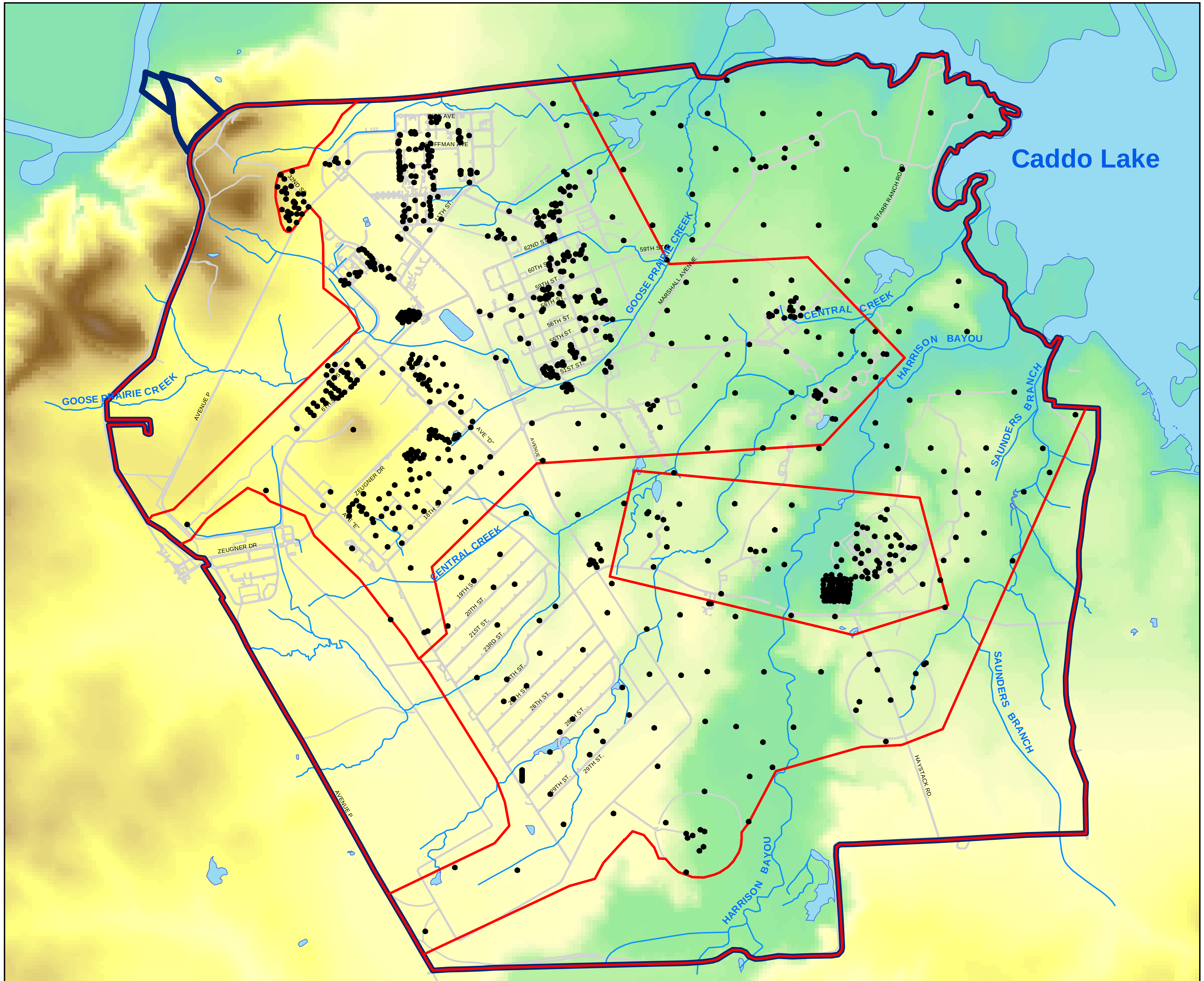
COPEC constituent of potential ecological concern
ESV ecological screening value
HQ_{screen} screening-level hazard quotient
MDC maximum detected concentration
mg/kg milligrams per kilogram
NA not applicable
NSV no screening value available
TCEQ Texas Commission on Environmental Quality

Table 6-28
Preliminary Constituents of Potential Ecological Concern

COPEC	Surface Soil Location			Surface Water Location				Sediment Location			
	ISA	LISA	WSA	HB	GPC	CC	SB	HB	GPC	CC	SB
Inorganic Analytes											
Aluminum	X		X	X	X	X		X	X	X	X
Antimony	X	X	X								
Barium			X					X	X	X	X
Cadmium	X	X	X			X		X	X	X	X
Chromium	X	X	X	X							
Copper	X	X	X	X	X	X		X	X	X	X
Iron	X	X	X	X	X	X					
Lead	X	X	X	X	X	X	X		X		
Manganese		X		X	X	X					X
Mercury	X	X	X					X	X	X	X
Nickel	X	X	X					X		X	X
Selenium	X	X	X	X	X			X	X	X	X
Silver									X		
Strontium	X	X	X								
Thallium				X	X			X	X	X	
Vanadium	X	X	X	X		X					X
Zinc	X	X	X		X			X	X	X	X
Volatile Organic Compounds											
Isobutanol										X	
p-Isopropyltoluene			X								
Semivolatile Organic Compounds											
Benzoic Acid		X									
bis(2-Ethylhexyl)phthalate					X			X			X
Butyl benzyl phthalate			X								
Hexachlorobenzene	X	X	X								
Pentachlorophenol		X									
Dioxins/Furans											
2,3,7,8-TCDD TEQ	X	X	X	X	X	X		X	X	X	X
Organochlorine Pesticides											
4,4'-DDD	X	X	X						X		
4,4'-DDE	X	X	X								
4,4'-DDT	X	X	X						X		
Aldrin	X	X									
alpha-Chlordane	X	X	X								
Chlordane	X	X									
cis-Nonachlor	X	X									
Dieldrin	X	X							X		
Endrin	X	X	X								
gamma-Chlordane	X										
Heptachlor	X										
Mirex		X	X								
Oxychlordane		X									
Pentachloroanisole	X	X	X								
trans-Nonachlor	X	X									
Polychlorinated Biphenyls											
Aroclor 1242	X	X	X								
Aroclor 1248	X	X									
Aroclor 1254	X	X	X						X		
Aroclor 1260	X	X	X								
Aroclor 1268		X									
Nitroaromatic Compounds											
1,3,5-Trinitrobenzene			X								
1,3-Dinitrobenzene			X								
2,4,6-Trinitrotoluene			X								
2,4-Dinitrotoluene			X								
2,6-Dinitrotoluene			X								
HMX			X								
Perchlorate											
Perchlorate	X	X	X								
General Chemistry											
Nitrate/Nitrite				X	X	X					
Nitrate	X	X	X	X	X	X	X	X		X	X
Sulfate	X	X	X	X	X	X	X	X	X	X	X

Notes:

CC Central Creek
GPC Goose Prairie Creek
HB Harrison Bayou
ISA Industrial Sub-Area
LISA Low Impact Sub-Area
SB Saunders Branch
WSA Waste Sub-Area



Legend

- Creek/Bayou
- Road
- Water Body
- Sub-Area and Reference Area
- Longhorn Army Ammunition Plant Approximated Boundary
- Soil Sample Location

N
W E
S

0 1,000 2,000 4,000 6,000

State Plane Feet

Shaw®

U.S. Army Corps of Engineers
Tulsa District
Tulsa, Oklahoma

Figure 6-1

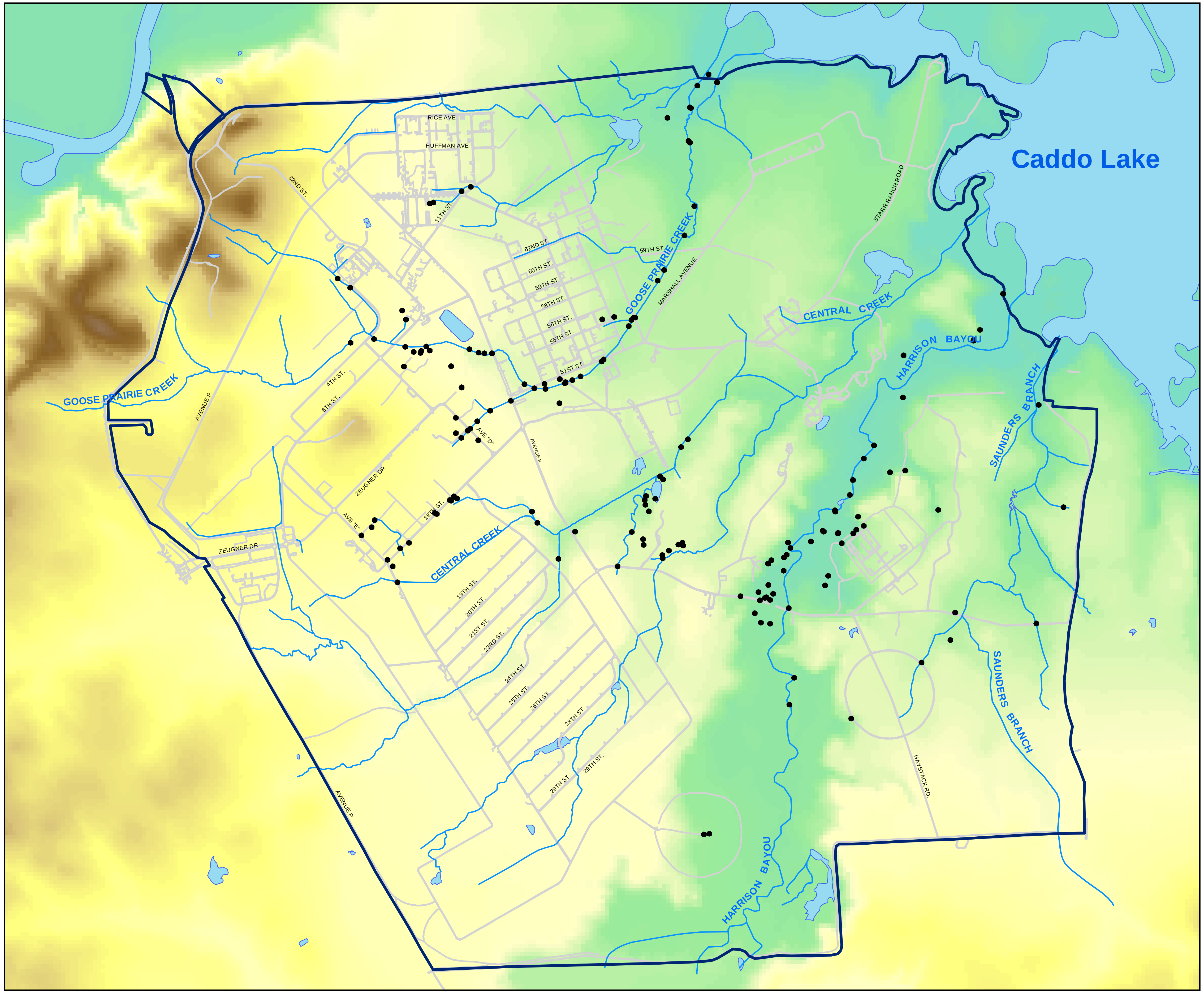
Soil Sample Location Map

Longhorn Ammunition Plant
Karnack, Texas

FILE LOCATION	OFFICE	COMPILED BY	CHECKED BY	APPROVED BY
seiknxgis000\longhorn\gisworkspace\mxd\6-1_soil_sample.mxd	Houston, TX	S.BROWN 11/27/04	B.LU 11/27/04	P.SRIVASTAV 11/27/04

PLOT DATE: 04/26/04
REVISION FORMAT: 11/28/04

FILE LOCATION	OFFICE	COMPILED BY	CHECKED BY	APPROVED BY
seiknxgis00/longhorn/gisworkspace/mxd/6-2_surf_water.mxd	Houston, TX	S.BROWN 11/27/04	B.LU 11/27/04	P. SRIVASTAV 11/27/04



Legend

- Creek/Bayou
- Road
- Water Body
- Longhorn Army Ammunition Plant Approximated Boundary
- Surface Water Sample Location

N
W E
S

0 950 1,900 3,800 5,700

State Plane Feet

Shaw®

U.S. Army Corps of Engineers
Tulsa District
Tulsa, Oklahoma

Figure 6-2

Surface Water Sample Location Map

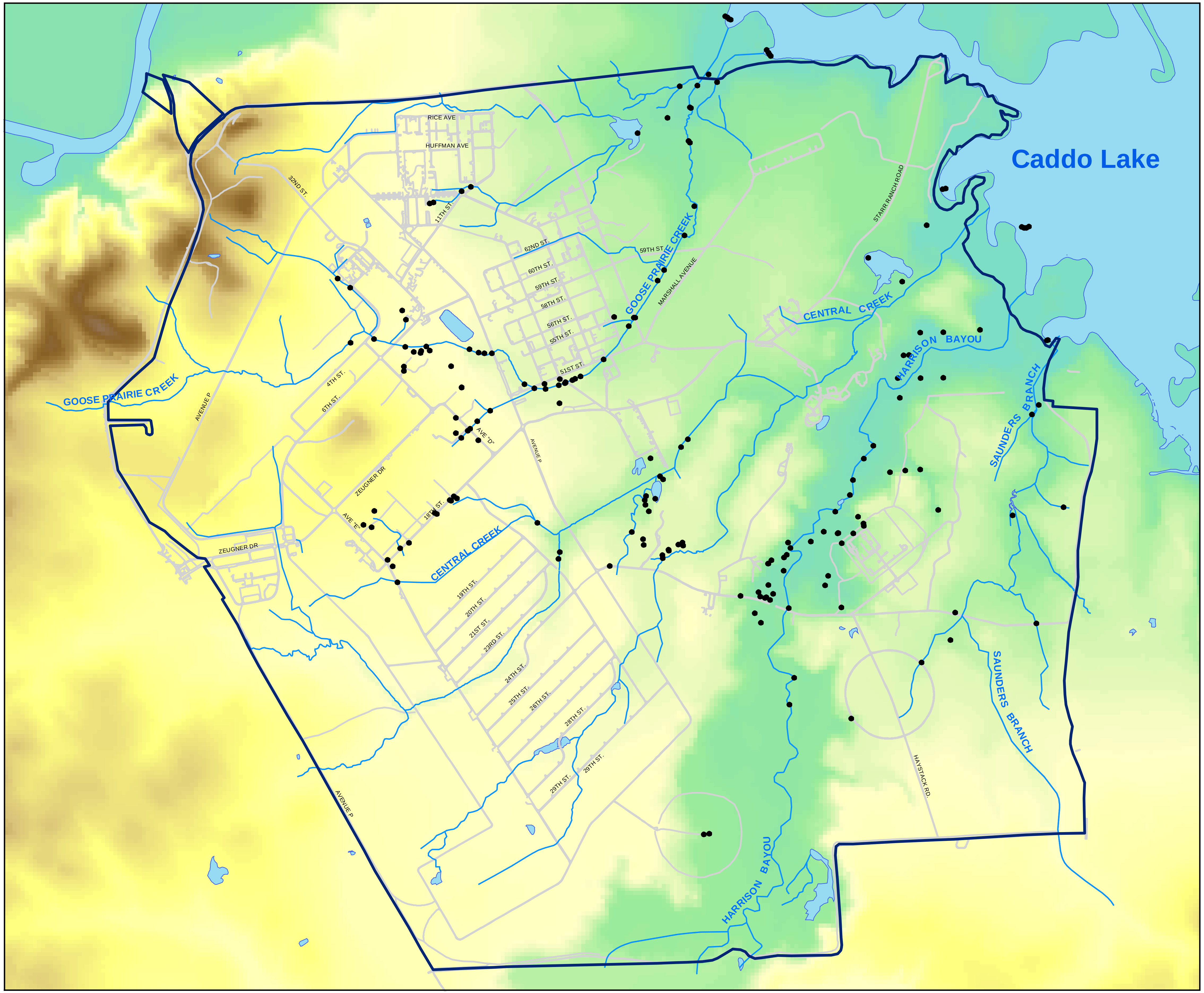
Longhorn Ammunition Plant
Karnack, Texas

PLOT DATE: 04/26/04
REVISION FORMAT: 11/28/04

00049756

FILE LOCATION	OFFICE	COMPILED BY	CHECKED BY	APPROVED BY
seiknxgis00/longhorn/gisworkspace/mxd/6-3_sediment.mxd	Houston, TX	S.BROWN 11/27/04	B.LU 11/27/04	P. SRIVASTAV 11/27/04

PLOT DATE: 04/26/04
REVISION FORMAT: 11/28/04



Legend

- Creek/Bayou
- Road
- Water Body
- Longhorn Army Ammunition Plant Approximated Boundary
- Sediment Sample Location

N
W E
S

0 950 1,900 3,800 5,700

State Plane Feet

Shaw®

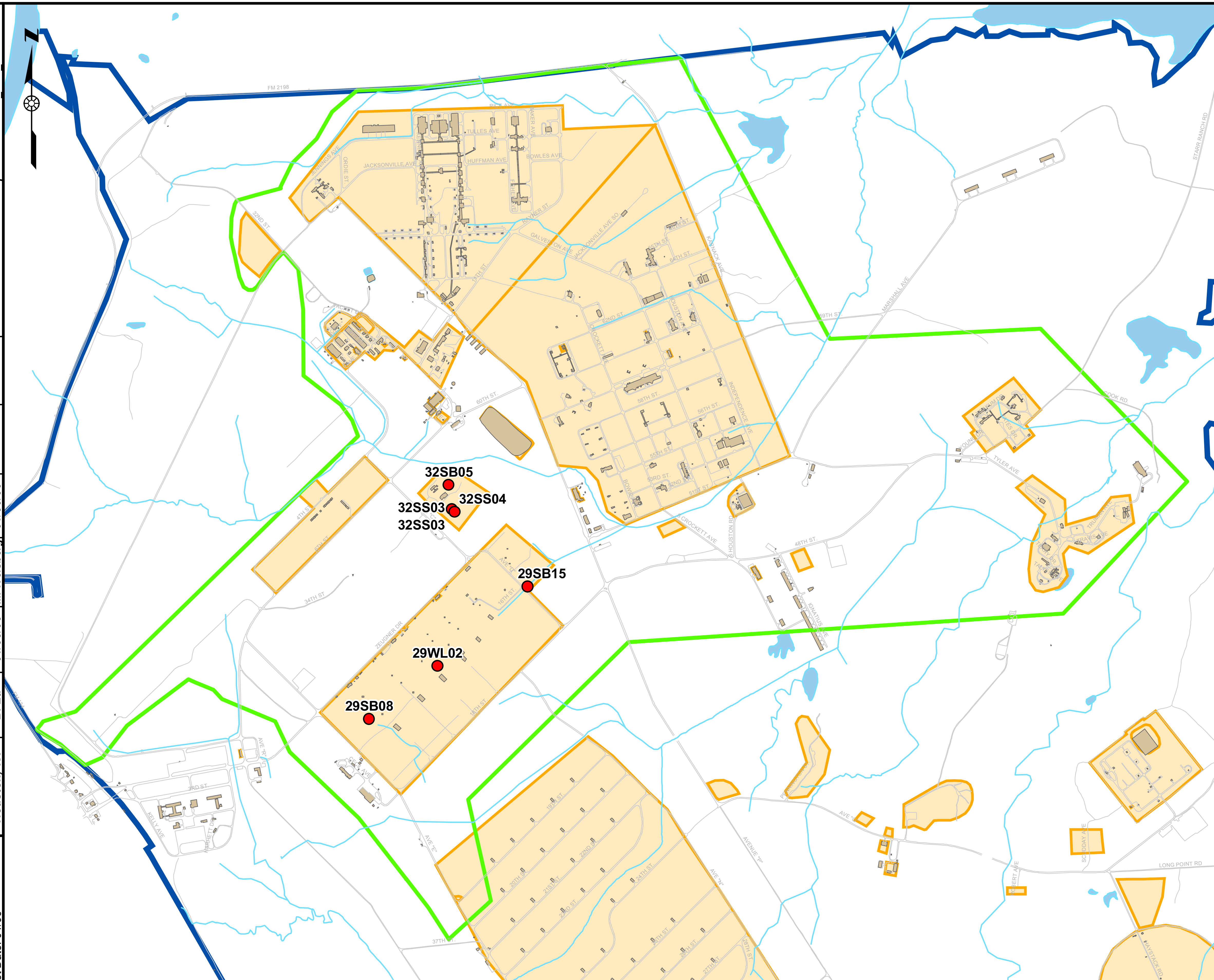
U.S. Army Corps of Engineers
Tulsa District
Tulsa, Oklahoma

Figure 6-3

Sediment Sample Location Map

Longhorn Ammunition Plant
Karnack, Texas

00049756



Legend

- 2,4,6-TNT Detection
- Stream
- Road
- Building or Concrete Slab
- Site
- Industrial Sub-area
- Approximate LHAAP Boundary

0 750 1,500 3,000 Feet

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TULSA DISTRICT
TULSA, OKLAHOMA

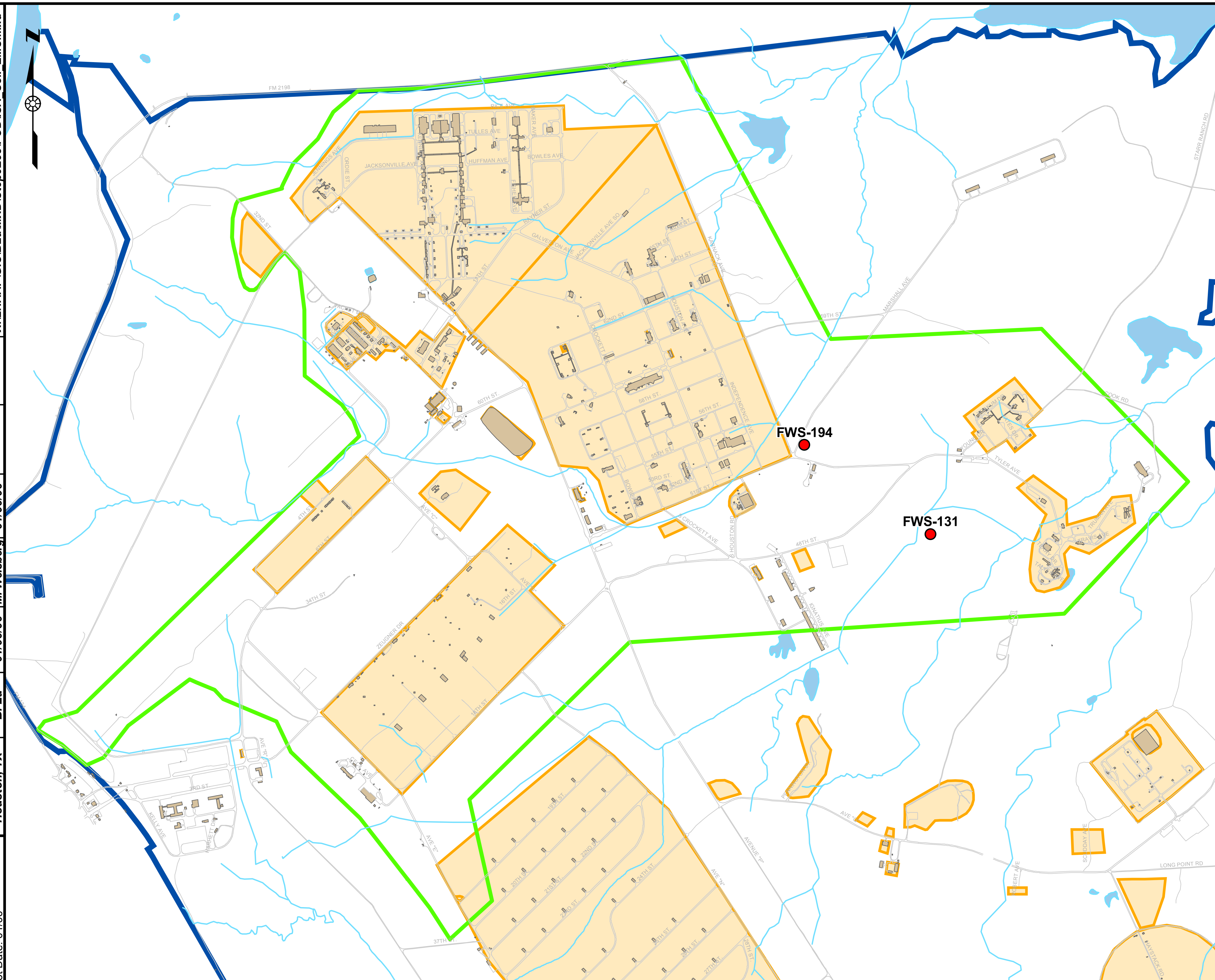
FIGURE 6-4

2,4,6-TRINITROTOLUENE DETECTIONS IN SOIL
INDUSTRIAL SUB-AREA

LONGHORN ARMY AMMUNITION PLANT
KARNACK, TEXAS

OFFICE	DRAWN BY	CHECKED BY	APPROVED BY	FILE PATH
Houston, TX	B. Lu 01/06/06	M. Weisberg 01/06/06		X:\LHAAP\GIS\BLu\MXD\Step3Eco\FODI\SA_Soil_TNT.mxd

Plot Date: 01/06



Legend

- Ethyl Methane Sulfonate Detection
- Stream
- Road
- Building or Concrete Slab
- Site
- Industrial Sub-area
- Approximate LHAAP Boundary

0 750 1,500 3,000 Feet

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT
TULSA, OKLAHOMA

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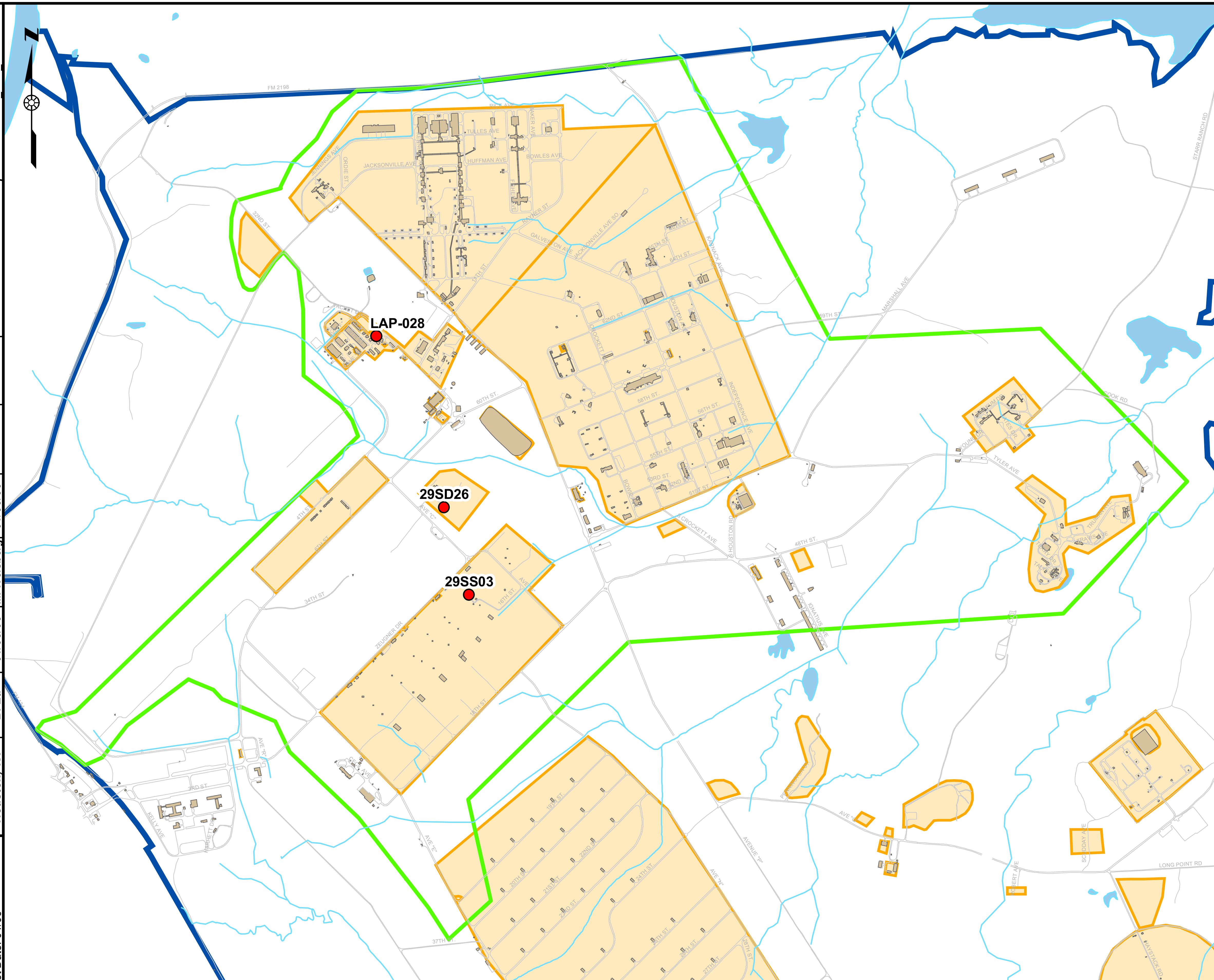
FIGURE 6-5
ETHYL METHANE SULFONATE DETECTIONS IN SOIL
INDUSTRIAL SUB-AREA
LONGHORN ARMY AMMUNITION PLANT
KARNACK, TEXAS

OFFICE	DRAWN BY	CHECKED BY	APPROVED BY	FILE PATH
Houston, TX	B. Lu 01/06/06	M. Weisberg 01/06/06		X:\LHAAP\GIS\BLu\MXD\Step3Eco\FOD\SA_Soil_EMS.mxd

Plot Date: 01/06

00049758



Legend

- p-Isopropyl Toluene Detection
- Stream
- Road
- Building or Concrete Slab
- Site
- Industrial Sub-area
- Approximate LHAAP Boundary

0 750 1,500 3,000 Feet

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FIGURE 6-6

P-ISOPROPYL TOLUENE DETECTIONS IN SOIL
INDUSTRIAL SUB-AREA

LONGHORN ARMY AMMUNITION PLANT
KARNACK, TEXAS

OFFICE	DRAWN BY	CHECKED BY	APPROVED BY	FILE PATH
Houston, TX	B. Lu 01/06/06	M. Weisberg 01/06/06		X:\LHAAP\GIS\BLu\MXD\Step3Eco\FOD\ISA_Soil_PIT.mxd

Plot Date: 01/06

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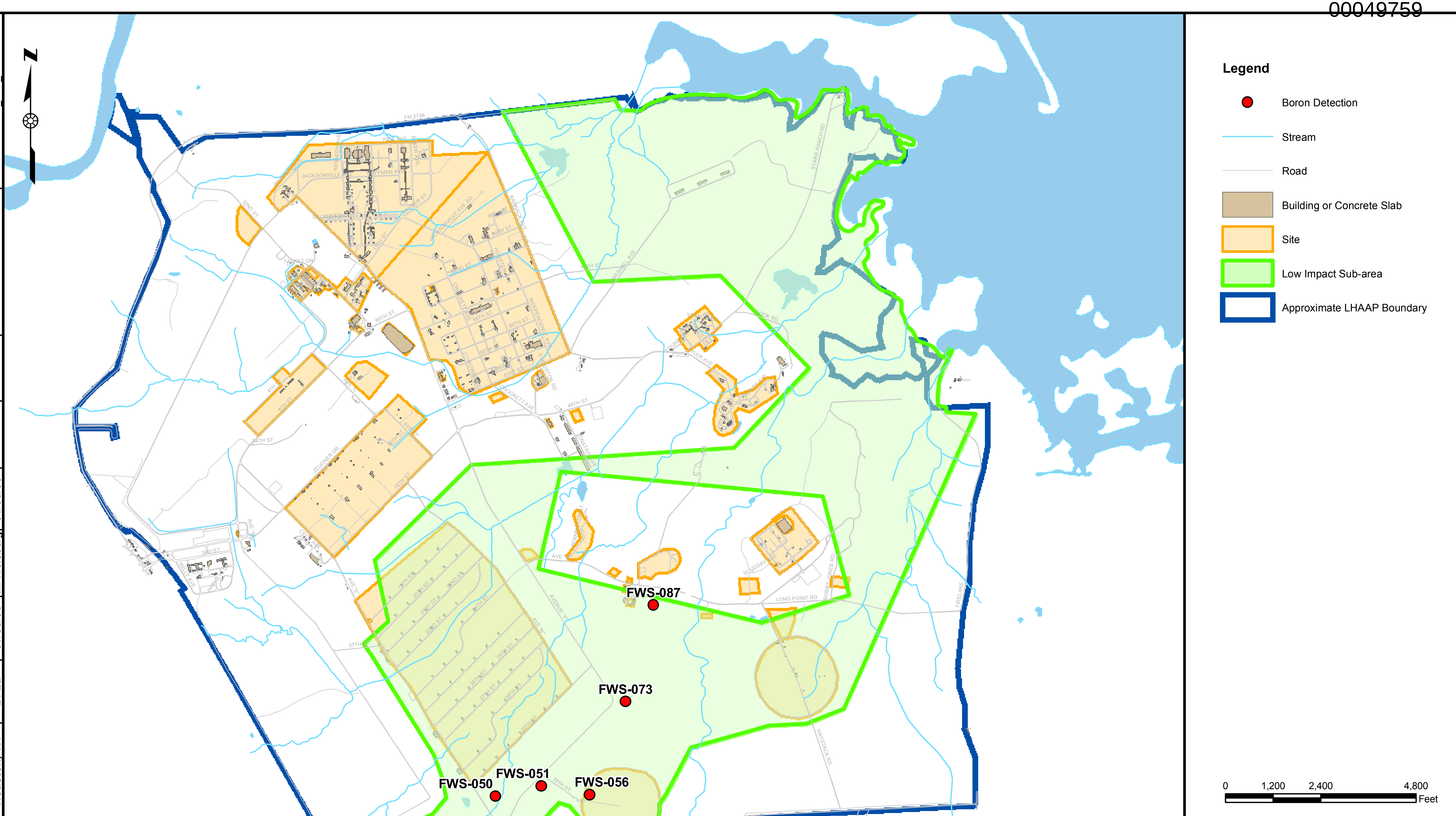

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TULSA, OKLAHOMA

Shaw

FIGURE 6-7

BORON DETECTIONS IN SOIL
LOW IMPACT SUB-AREA

LONGHORN ARMY AMMUNITION PLANT
KARNACK, TEXAS

OFFICE	DRAWN BY	CHECKED BY	APPROVED BY	FILE PATH
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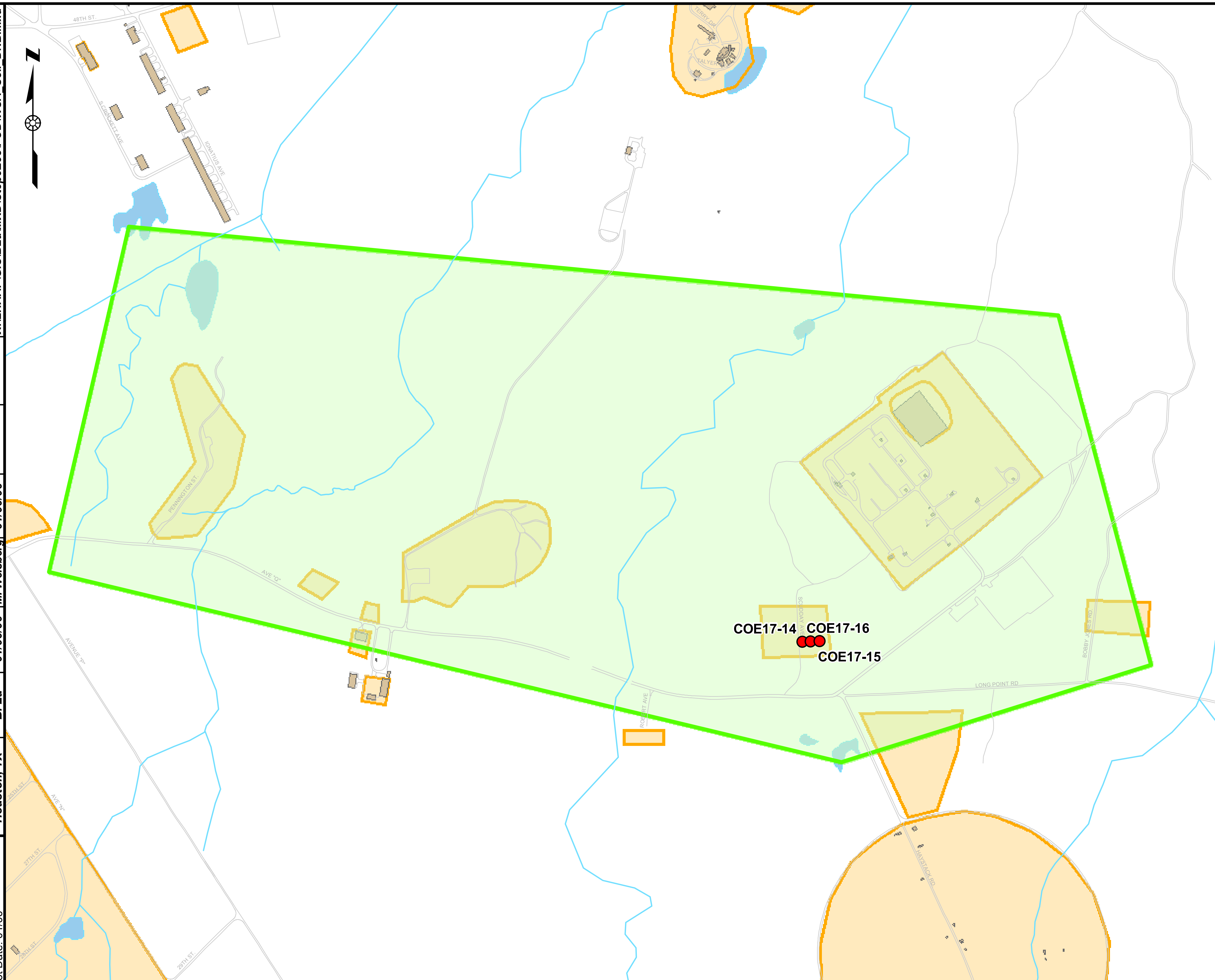
Plot Date: 01/06

00049760



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APPROVED BY

CHECKED BY M. Weisberg 01/06/06

DRAWN BY B. Lu 01/06/06

OFFICE Houston, TX

Plot Date: 01/06

Shaw

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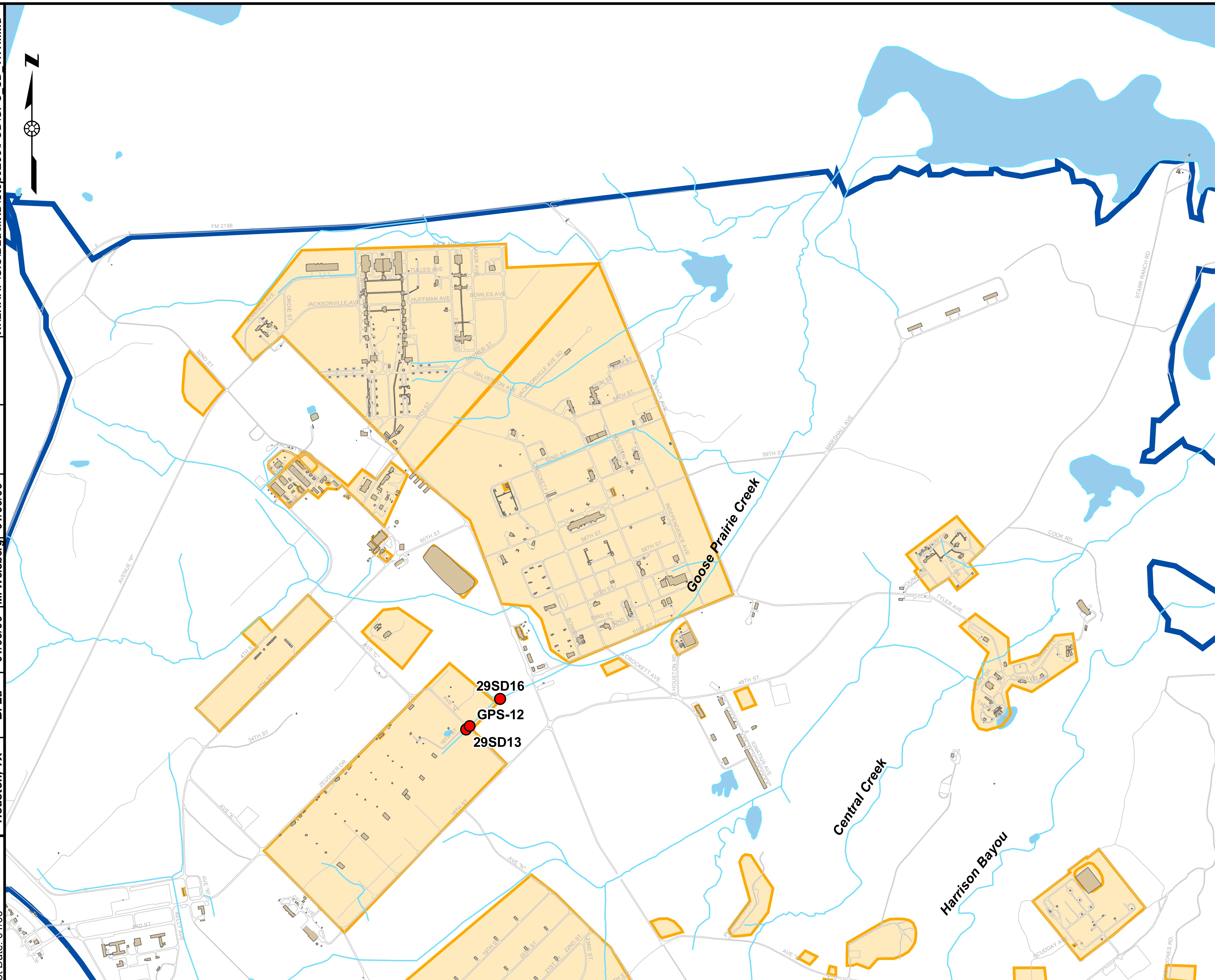
TULSA, OKLAHOMA

FIGURE 6-8

1,3-DINITROBENZENE DETECTIONS IN SOIL WASTE SUB-AREA

LONGHORN ARMY AMMUNITION PLANT
KARNACK, TEXAS

00049761



FILE PATH	APPROVED BY	CHECKED BY	DRAWN BY	OFFICE
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Plot Date: 01/06

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FIGURE 6-9

2,4,6-TRINITROTOLUENE DETECTIONS
IN SEDIMENT
GOOSE PRAIRIE CREEK WATERSHED

LONGHORN ARMY AMMUNITION PLANT
KARNACK, TEXAS

00049762

Legend

- Phenanthrene Detection
- Stream
- Road
- Building or Concrete Slab
- Site
- Approximate LHAAP Boundary

0 750 1,500 3,000 Feet

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TULSA, OKLAHOMA

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FIGURE 6-10

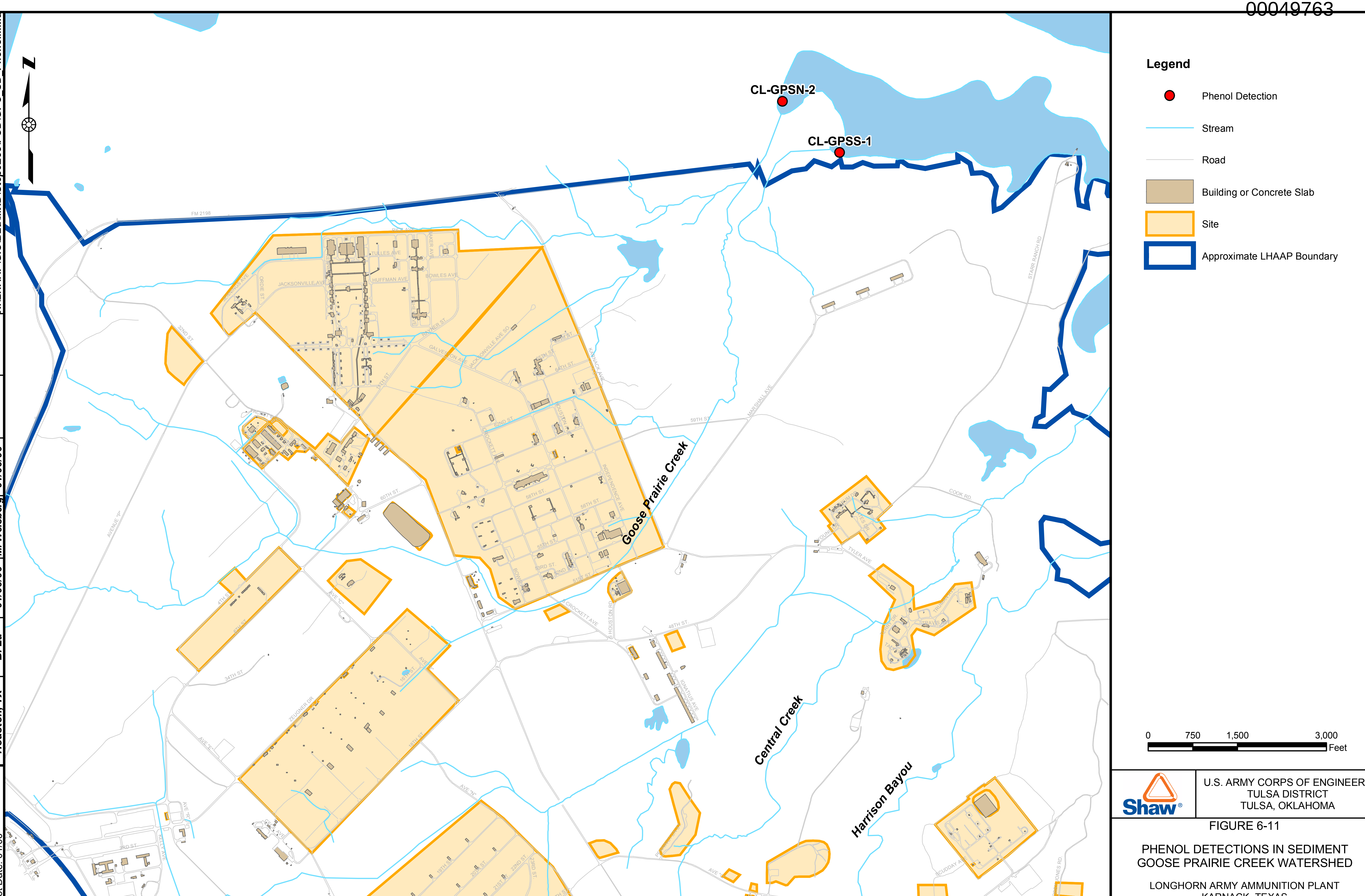
PHENANTHRENE DETECTIONS IN SEDIMENT
GOOSE PRAIRIE CREEK WATERSHED

LONGHORN ARMY AMMUNITION PLANT
KARNACK, TEXAS

OFFICE	DRAWN BY	CHECKED BY	APPROVED BY	FILE PATH
Houston, TX	B. Lu 01/06/06	M. Weisberg 01/06/06		X:\LHAAP\GIS\BLu\MXD\Step3Eco\FOD\GPC_SD_PNT.mxd

Plot Date: 01/06

00049763



OFFICE	DRAWN BY	CHECKED BY	APPROVED BY	FILE PATH
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Plot Date: 01/06

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TULSA, OKLAHOMA

FIGURE 6-11

PHENOL DETECTIONS IN SEDIMENT
GOOSE PRAIRIE CREEK WATERSHED

LONGHORN ARMY AMMUNITION PLANT
KARNACK, TEXAS

7.0 Risk Characterization and Risk Estimation

Risk characterization includes two major steps: risk estimation and risk description (USEPA, 1992a). The risk estimation is accomplished through two approaches. The first approach is comprised of a direct toxicity evaluation (**Section 7.1**) to determine whether exposure to concentrations in media may result in toxicity to organisms at lower levels of the food chain (e.g., plants, benthic invertebrates, etc.) and fish. The second approach is comprised of the food chain model (**Section 7.2**). In the refined food chain model, the uptake of concentrations in media and food sources is modeled throughout the various trophic levels of the food chain, and hazards are estimated for higher trophic-level measurement receptors. The potential impacts from all appropriate exposure routes from all media (soil, water, sediment, and prey) are included in this evaluation as appropriate according to USEPA guidance (USEPA, 1989a).

The risk description consists of a summary of the results of the risk estimation and uncertainty analysis and an assessment of confidence in the risk estimates through a discussion of the weight of evidence. The risk description can also include a discussion of additional data or analyses that may reduce the uncertainty in the risk estimates. The risk description is provided via the summary of the results of this section as well as in the text provided in **Sections 8.0** through **10.0**.

7.1 Direct Toxicity Evaluation

A direct toxicity evaluation was conducted to determine whether significant impacts may be occurring to (1) lower-trophic level organisms that could result in a population reduction, which may in turn impact higher trophic level organisms by reducing their food source, and (2) fish. Chemicals that were identified as COPECs following the initial benchmark screen were compared with a variety of benchmark values appropriate for organisms at the base of the food chain and for fish. The results of this direct toxicity evaluation are presented in the following sub-sections.

7.1.1 Terrestrial Direct Toxicity Evaluation

Preliminary COPECs in soil were compared with earthworm and plant benchmark toxicity values from Efroymson et al. (1997c). Benchmark concentrations from LANL (2005) and USEPA (2005) were used as supplemental sources of screening values for the plant and earthworm direct toxicity evaluation. An ecological effects quotient (EEQ) was generated for each chemical. The EEQ is the concentration in the medium divided by the benchmark. EEQs greater than 1 indicate an exceedance. Two direct toxicity screens were conducted for both earthworms and plants. The Tier 1 screen used the 95 percent UCLs of the chemical in the medium, while the Tier 2 screen used the mean concentrations. The Tier 1 screen was used as the primary basis for making decisions at the Step 3 stage. The total soil data sets were used for this evaluation.

7.1.1.1 Industrial Sub-Area

Of the chemicals for which an earthworm benchmark was available, chromium and mercury had EEQs that exceeded 1 for both the Tier 1 and Tier 2 screens (**Table 7-1**). It should be noted that the chromium exceedance occurred only when the benchmark for hexavalent chromium was used; when screened against a trivalent chromium benchmark, the EEQ was below 1. Trivalent chromium is much more abundant in natural systems than hexavalent chromium, and is the form of chromium likely present in LHAAP soil (for chromium speciation results and discussion, see **Section 14.1** in **Volume II**). For the plant direct toxicity analysis, aluminum (both Tiers), chromium (both trivalent and hexavalent; both Tiers), mercury (Tier 1 only), selenium (both Tiers), vanadium (both Tiers) and zinc (both Tiers) exceeded benchmarks (**Table 7-2**).

7.1.1.2 Low Impact Sub-Area

Of the chemicals for which an earthworm benchmark was available, only chromium had an EEQ that exceeded 1 (**Table 7-3**). Chromium exceeded the earthworm benchmark for both the Tier 1 and the Tier 2 screens. It should be noted that the chromium exceedance occurred only when the benchmark for hexavalent chromium was used; when screened against a trivalent chromium benchmark, the EEQ was below 1. Trivalent chromium is much more abundant in natural systems than hexavalent chromium, and is the form of chromium likely present in LHAAP soil (for chromium speciation results and discussion, see **Section 14.1** in **Volume II**). For the plant direct toxicity evaluation, chromium (both trivalent and hexavalent; both Tiers), manganese (both Tiers), vanadium (both Tiers), and zinc (Tier 1 only) exceeded benchmarks (**Table 7-4**).

7.1.1.3 Waste Sub-Area

Of the chemicals for which an earthworm benchmark was available, barium, chromium and TNT had EEQs that exceeded 1 for both Tiers (**Table 7-5**). It should be noted that the chromium exceedance occurred only when the benchmark for hexavalent chromium was used; when screened against a trivalent chromium benchmark, the EEQ was below 1. Trivalent chromium is much more abundant in natural systems than hexavalent chromium, and is the form of chromium likely present in LHAAP soil (for chromium speciation results and discussion, see **Section 14.1** in **Volume II**). For the plant direct toxicity analysis, aluminum (both tiers), barium (Tier 1 only), chromium (both trivalent and hexavalent; both Tiers), lead (Tier 1 only), vanadium (both Tiers), zinc (Tier 1 only), and TNT (both Tiers) exceeded benchmarks (**Table 7-6**).

7.1.2 Aquatic Direct Toxicity Evaluation

The direct contact evaluation for COPECs selected for surface water and sediment was performed using two lines of evidence: (1) by comparing Tier 1 and Tier 2 surface water and sediment EPCs with all readily available benchmarks for these media (TCEQ, USEPA, ORNL, etc.); and (2) by modeling COPEC concentrations in fish tissue as a result of potential bioaccumulation from surface water or sediment, and comparing these tissue body burden concentrations with CBRs associated with potential adverse effects. Although this CBR approach is not strictly a "direct toxicity" evaluation, it is included in this section for simplicity. For surface water COPECs, fish tissue concentrations in the Fathead Minnow receptor were estimated using water to fish BCFs. The Fathead Minnow is a surrogate species for the Bluehead Shiner, a state-listed threatened species possibly occurring at LHAAP. For sediment COPECs, fish tissue concentrations in the Brown Bullhead Catfish were estimated using the computer software TrophicTrace® (**Appendix B**). This software, sponsored by the USACE Waterways Experiment Station to evaluate dredge disposal options <http://www.wes.army.mil/el/trophictrace>, uses a variety of trophic modeling approaches. A TrophicTrace® Users Manual is available from the following web site: http://el.erdc.usace.army.mil/trophictrace/ttmanual.pdf. For the Step 3 portion of this ERA the selected approaches included the Gobas food-chain modeling approach for organic COPECs, the trophic transfer factor approach for cadmium, chromium, copper, lead, mercury, nickel, silver, and zinc (sediment to benthic invertebrates to fish), and the BCF approach for remaining metal COPECs (sediment to pore water [using partition coefficients] to fish tissue [using BCFs]).

CBRs were generally selected from Jarvinen and Ankley (1999) and other appropriate references including <http://www.wes.army.mil/el/ered/> (November 2004), and represent chemical concentrations in fish tissue associated with statistically significant reductions in survival, growth, and/or reproduction. Both NOAEL and LOAEL CBRs were used to provide a hazard range for consideration by risk managers; however, NOAEL-based HQs were used as the primary basis for making decisions at the Step 3 stage. If a variety of appropriate NOAEL and LOAEL CBRs were available for a particular COPEC, the highest NOAEL CBR and the lowest LOAEL CBR were generally selected, as discussed in detail in **Appendix C**.

For both Tier 1 and Tier 2 approaches, estimated fish tissue COPEC concentrations were divided by the available CBR NOAEL and LOAEL values to estimate NOAEL- and LOAEL-based surface water and sediment HQs (HQs are used instead of EEQs to differentiate the CBR approach results from the food chain modeling approach results, which are discussed in **Section 7.2.2**). Results of the direct contact evaluation are presented below, for each watershed, based on data presented in **Tables 7-7** through **7-14**. These results are summarized in **Tables 7-15** and **7-16**, along with results of the CBR hazard evaluation. As there is considerable uncertainty associated with the modeling of fish tissue concentrations from surface water and sediment, and actual fish tissue samples were collected recently (**Section 2.2.4**; USEPA Region 6, 2004), a critical comparison between modeled and measured fish tissue COPEC concentrations is presented in the Step 3 Uncertainty Analysis (**Section 8.0**).

A weight-of-evidence evaluation was used to assess the results of concentration comparisons with available benchmarks, as follows:

- Surface water COPECs that had 95% UCLs or mean concentrations that exceeded promulgated state and federal criteria, and those COPECs with a majority of the available benchmarks exceeded, were considered for selection as final COPECs (and discussed in **Section 10.0**). For those COPECs that did not have promulgated criteria and did not have a majority of the available benchmarks exceeded, a weight of evidence approach was taken where the appropriateness (strengths, weaknesses, etc.) of any supplemental benchmarks was discussed.
- Sediment COPECs that had 95% UCLs or mean concentrations greater than TCEQ protection concentration levels (PCLs) (i.e., the midpoint of Ecological Benchmarks for Sediment and Second Effect Levels for Sediment), or those COPECs with a majority of the available benchmarks exceeded were considered for selection as final COPECs. For those sediment COPECs that did not have TCEQ sediment benchmarks, a weight of evidence approach was taken, where the appropriateness (strengths, weaknesses, etc.) of any supplemental benchmarks was discussed.

For those COPECs without promulgated surface water or sediment criteria, use of a weight-of-evidence approach based on the appropriateness [strengths, weaknesses, etc.] of the supplemental benchmarks is considered justified. This is necessary because many non-promulgated benchmarks are highly conservative or may be of minor relevance to the LHAAP installation; therefore, the finding that concentrations exceed a non-promulgated benchmark is not necessarily ecologically significant, and is not an appropriate criterion for COPEC selection. For example, lowest chronic surface water benchmarks for aquatic plants (**Tables 7-7, 7-9, 7-11**, and **7-13**) and National Oceanic and Atmospheric Administration (NOAA) Effect Range benchmarks for marine environments (**Tables 7-8, 7-10, 7-12**, and **7-14**) are not likely of critical importance or relevance to LHAAP. However, in order to streamline the direct toxicity screening process, chemicals that exceeded a majority of available benchmarks were considered to have enough potential to result in aquatic toxicity to warrant consideration as final COPECs based on best professional judgment.

7.1.2.1 Harrison Bayou Watershed

Results of the comparison of surface water and sediment COPECs with available media benchmarks are presented in **Tables 7-7** and **7-8**, and summarized in **Table 7-15**. Of the available surface water benchmarks, under the Tier 1 and Tier 2 approaches, nine COPECs had one or more of the benchmarks exceeded. As a weight-of-evidence finding, surface water

COPECs that had concentrations that exceeded promulgated state and federal criteria, and those COPECs with a majority of the available benchmarks exceeded were considered for selection as final COPECs. These surface water COPECs (aluminum, barium, copper, iron, and lead) are designated by bolding of the exceedance fraction in the fourth column of **Table 7-15**. It should be noted that although the 95% UCL for sulfate in Harrison Bayou (57.6 milligrams per liter [mg/L]) slightly exceeds the Texas Surface Water Quality Standard for Caddo Lake of 50 mg/L, it is unlikely that the relatively minor contribution of inflow from the Bayou adversely affects Caddo Lake due to dilution effects.

Manganese has no promulgated surface water quality criteria, and two of the available five benchmarks were exceeded by the UCL and mean concentrations. The two benchmarks exceeded are the Tier II secondary chronic value and the Texas benchmark that is based on the Tier II value (120 µg/L). This Tier II manganese value is potentially appropriate for use at LHAAP, although it is based on less than the minimum eight family taxonomic requirement for water quality development (USEPA, 1995).

Vanadium has no promulgated surface water quality criteria, and two of the available five benchmarks were exceeded by the UCL and mean concentrations. The two benchmarks exceeded are the Tier II secondary chronic value and the Texas benchmark that is based on the Tier II value (20 ug/L). This Tier II vanadium value is potentially appropriate for use at LHAAP, although it is based on less than the minimum eight family taxonomic requirement for water quality development (USEPA, 1995).

Of the available sediment benchmarks, under the Tier 1 and Tier 2 approaches, two COPECs had one or more of the benchmarks exceeded. As a weight-of-evidence finding, those COPECs with a majority of the available benchmarks exceeded were considered for selection as final COPECs. These sediment COPECs (2,3,7,8-TCDD TEQ, and bis(2-ethylhexyl)phthalate [BEHP]) are designated by bolding of the exceedance fraction in the seventh column of **Table 7-15**.

Results of the estimated COPEC bioaccumulation in fish tissue and the calculation of HQs using COPEC-specific CBRs are also presented in **Table 7-15**. These results show that for surface water five COPECs had HQs estimated to exceed 1.0 under the Tier 1 NOAEL- and LOAEL-based approach, while under the Tier 2 NOAEL- and LOAEL-based approach, one COPEC had an HQ estimated to exceed 1.0. For a critical comparison of modeled and measured fish tissue COPEC concentrations, see **Section 8.0** (Step 3 Uncertainty Analysis).

For sediment, four COPECs had HQs estimated to exceed 1.0 under the Tier 1 NOAEL- and LOAEL-based approach, while under the Tier 2 NOAEL- and LOAEL-based approach, one COPEC had an HQ estimated to exceed 1.0 (**Table 7-15**). For a critical comparison of modeled and measured fish tissue COPEC concentrations, see **Section 8.0** (Step 3 Uncertainty Analysis).

7.1.2.2 Goose Prairie Creek Watershed

Results of the comparison of surface water and sediment COPECs with available media benchmarks are presented in **Tables 7-9** and **7-10**, and summarized in **Table 7-15**. Of the available surface water benchmarks, under the Tier 1 and Tier 2 approaches, eight COPECs had one or more of the benchmarks exceeded. As a weight-of-evidence finding, surface water COPECs that had concentrations that exceeded promulgated state and federal criteria, and those COPECs that exceeded a majority of the available benchmarks were considered for selection as final COPECs. These surface water COPECs (aluminum, barium, copper, iron, lead, and BEHP) are designated by bolding of the exceedance fraction in the fourth column of **Table 7-15**.

Manganese has no promulgated surface water quality criteria, and two of the available five benchmarks were exceeded by the UCL and mean concentrations. The two benchmarks exceeded are the Tier II secondary chronic value and the Texas benchmark that is based on the Tier II value (120 ug/L). This Tier II manganese value is potentially appropriate for use at LHAAP, although it is based on less than the minimum eight family taxonomic requirement for water quality development (USEPA, 1995).

Of the available sediment benchmarks, under the Tier 1 and Tier 2 approaches, nine COPECs had one or more of the benchmarks exceeded. As a weight-of-evidence finding, those COPECs exceeding a majority of the available benchmarks were considered for selection as final COPECs. These sediment COPECs (lead, mercury, silver, and carbon disulfide) are designated by bolding of the exceedance fraction in the seventh column of **Table 7-15**.

Five COPECs exceeded at least one, but less than a majority, of the available benchmarks, and these are discussed as follows:

- **2,3,7,8-TCDD TEQ**. Of the three available benchmarks only the Canadian interim sediment quality guideline (ISQG) of 8.5E-7 mg/kg was exceeded. However, as the ISQG is a NOAEL, and the Canadian PEL of 2.15E-5 mg/kg can be considered a LOAEL, using the TCEQ approach of estimating a PCL by taking the midpoint between the NOAEL and LOAEL (TCEQ, 2005) results in a comparison value of 1.1E-5 mg/kg. Neither the 95% UCL nor mean exceed this comparison value. Therefore, 2,3,7,8-TCDD TEQ is not recommended for consideration as a final COPEC in sediment.
- **4,4'-DDD**. Of the nine available benchmarks only the NOAA effect range low (ER-L) was exceeded. However, as this benchmark is based on marine data and approximates a NOAEL, and none of the other 8 available benchmarks were exceeded, 4,4'-DDD is not recommended for consideration as a final COPEC in sediment. In addition, using the TCEQ approach of estimating a PCL by taking the midpoint between the TCEQ NOAEL (Texas Ecological Benchmark) and LOAEL (Texas Second Effect Level; TCEQ, 2005) results in a comparison value of 0.016 mg/kg (mean of 0.00488 mg/kg and 0.028 mg/kg). Based on the use of this PCL,

4,4’-DDD is not recommended for consideration as a final COPEC in sediment, as the 95% UCL (0.00297 mg/kg) does not exceed the PCL.

- **4,4’-DDT**. Of the nine available benchmarks only two were exceeded: the NOAA ER-L and the Canadian ISQG. The ER-L benchmark is based on marine data and approximates a NOAEL, so it is not considered relevant. The ISQG of 0.00119 mg/kg can also be considered a NOAEL. Using the TCEQ approach of estimating a PCL by taking the midpoint between the TCEQ NOAEL (Texas Ecological Benchmark) and LOAEL (Texas Second Effect Level; TCEQ, 2005) results in a comparison value of 0.034 mg/kg (mean of 0.00416 mg/kg and 0.0629 mg/kg). As the 95% UCL of 0.00304 mg/kg does not exceed this comparison value, 4,4’-DDT is not recommended for consideration as a final COPEC in sediment.

- **Aroclor 1254**. Of the eight available benchmarks only the NOAA ER-L was exceeded. The ER-L benchmark is based on marine data and approximates a NOAEL, so it is not considered relevant. Based on this information, Aroclor 1254 is not recommended for consideration as a final COPEC in sediment.

- **Dieldrin**. Of the nine available benchmarks, three and four were exceeded by the mean and 95% UCL concentrations, respectively, including the TCEQ benchmark (0.0019 mg/kg), the Canadian ISQG (0.00285 mg/kg), the NOAA ER-L (0.00002 mg/kg), and the Florida DEP TEC (0.0019 mg/kg). The TCEQ benchmark is based on the Florida DEP TEC. Using the TCEQ approach of estimating a PCL by taking the midpoint between the TCEQ NOAEL (Texas Ecological Benchmark) and LOAEL (Texas Second Effect Level; TCEQ, 2005) results in a comparison value of 0.032 mg/kg (mean of 0.0019 mg/kg and 0.061 mg/kg). Based on the use of this PCL, dieldrin is not recommended for consideration as a final COPEC in sediment, as the 95% UCL (0.003 mg/kg) does not exceed the PCL.

Results of the estimated COPEC bioaccumulation in fish tissue and the calculation of HQs using COPEC-specific CBRs are also presented in **Table 7-15**. These results show that for surface water five COPECs had HQs estimated to exceed 1.0 under the Tier 1 NOAEL- and LOAEL-based approach, while under the Tier 2 NOAEL- and LOAEL-based approach, two COPECs had HQs estimated to exceed 1.0. For a critical comparison of modeled and measured fish tissue COPEC concentrations, see **Section 8.0** (Step 3 Uncertainty Analysis).

For sediment, six COPECs had HQs estimated to exceed 1.0 under the Tier 1 NOAEL- and LOAEL-based approach, while under the Tier 2 NOAEL- and LOAEL-based approach, three COPECs had HQs estimated to exceed 1.0 (**Table 7-15**). For a critical comparison of modeled and measured fish tissue COPEC concentrations, see **Section 8.0** (Step 3 Uncertainty Analysis).

7.1.2.3 Central Creek Watershed

Results of the comparison of surface water and sediment COPECs with available media benchmarks are presented **Tables 7-11** and **7-12**, and summarized in **Table 7-15**. Of the available surface water benchmarks, under the Tier 1 and Tier 2 approaches, nine COPECs had one or more of the benchmarks exceeded. As a weight-of-evidence finding, surface water COPECs that had concentrations that exceeded promulgated state and federal criteria, and those COPECs that exceeded a majority of the available benchmarks were considered for selection as final COPECs. These surface water COPECs (aluminum, barium, cadmium, copper, iron, lead, and 2,3,7,8-TCDD TEQ) are designated by bolding of the exceedance fraction in the fourth column of **Table 7-15**.

Manganese has no promulgated surface water quality criteria, and two of the available five benchmarks were exceeded by the UCL and mean concentrations. The two benchmarks exceeded are the Tier II secondary chronic value and the Texas benchmark that is based on the Tier II value (120 µg/L). This Tier II manganese value is potentially appropriate for use at LHAAP, although it is based on less than the minimum eight family taxonomic requirement for water quality development.

Vanadium has no promulgated surface water quality criteria, and two of the available five benchmarks were exceeded by the UCL and mean concentrations. The two benchmarks exceeded are the Tier II secondary chronic value and the Texas benchmark that is based on the Tier II value (20 µg/L). This Tier II vanadium value is potentially appropriate for use at LHAAP, although it is based on less than the minimum eight family taxonomic requirement for water quality development.

Of the available sediment benchmarks, under the Tier 1 and Tier 2 approaches, two COPECs had one or more of the benchmarks exceeded. As a weight-of-evidence finding, those COPECs that exceeded a majority of the available benchmarks were considered for selection as final COPECs. These sediment COPECs (2,3,7,8-TCDD TEQ, and carbon disulfide) are designated by bolding of the exceedance fraction in the seventh column of **Table 7-15**.

Results of the estimated COPEC bioaccumulation in fish tissue and the calculation of HQs using COPEC-specific CBRs are also presented in **Table 7-15**. These results show that for surface water four COPECs had HQs estimated to exceed 1.0 under the Tier 1 NOAEL- and LOAEL-based approach, while under the Tier 2 NOAEL- and LOAEL-based approach, two COPECs had HQs estimated to exceed 1.0. For a critical comparison of modeled and measured fish tissue COPEC concentrations, see **Section 8.0** (Step 3 Uncertainty Analysis).

For sediment, four COPECs had HQs estimated to exceed 1.0 under the Tier 1 NOAEL- and LOAEL-based approach, while under the Tier 2 NOAEL- and LOAEL-based approach, two COPECs had HQs estimated to exceed 1.0 (**Table 7-15**). For a critical comparison of modeled and measured fish tissue COPEC concentrations, see **Section 8.0** (Step 3 Uncertainty Analysis).

7.1.2.4 Saunders Branch Watershed

Results of the comparison of surface water and sediment COPECs with available media benchmarks are presented in **Tables 7-13** and **7-14**, and summarized in **Table 7-15**. Of the available surface water benchmarks, under the Tier 1 and Tier 2 approaches, two COPECs had one or more of the benchmarks exceeded. As a weight-of-evidence finding, surface water COPECs that had concentrations that exceeded promulgated state and federal criteria, and those COPECs that exceeded a majority of the available benchmarks were considered for selection as final COPECs. These surface water COPECs (barium and lead) are designated by bolding of the exceedance fraction in the fourth column of **Table 7-15**.

Of the available sediment benchmarks, under the Tier 1 approach, three COPECs had one or more of the benchmarks exceeded, while under the Tier 2 approach, two COPECs had one or more benchmarks exceeded. As a weight-of-evidence finding, those COPECs that exceeded a majority of the available benchmarks were considered for selection as final COPECs. These sediment COPECs (2,3,7,8-TCDD TEQ and BEHP) are designated by bolding of the exceedance fraction in the seventh column of **Table 7-15**.

One COPEC (manganese) exceeded at least one (but less than a majority) of the available benchmarks exceeded, and is discussed as follows:

- **Manganese.** Of the four available benchmarks only the Texas benchmark of 460 mg/kg was exceeded. Using the TCEQ approach of estimating a PCL by taking the midpoint between the TCEQ NOAEL (Texas Ecological Benchmark) and LOAEL (Texas Second Effect Level; TCEQ, 2005) results in a comparison value of 780 mg/kg (mean of 460 mg/kg and 1100 mg/kg). Neither the 95% UCL (488 mg/kg) nor mean (346 mg/kg) exceed this comparison value; therefore, manganese is not recommended for consideration as a final COPEC in sediment.

Results of the estimated COPEC bioaccumulation in fish tissue and the calculation of HQs using COPEC-specific CBRs are also presented in **Table 7-15**. These results show that for surface water no COPECs had HQs estimated to exceed 1.0 under the Tier 1 or Tier 2 NOAEL- and LOAEL-based approach. For a critical comparison of modeled and measured fish tissue COPEC concentrations, see **Section 8.0** (Step 3 Uncertainty Analysis).

For sediment, five COPECs had HQs estimated to exceed 1.0 under the Tier 1 NOAEL- and LOAEL-based approach, while under the Tier 2 NOAEL- and LOAEL-based approach, two COPECs had HQs estimated to exceed 1.0 (**Table 7-15**). For a critical comparison of modeled and measured fish tissue COPEC concentrations, see **Section 8.0** (Step 3 Uncertainty Analysis).

7.1.2.5 Summary of Aquatic Direct Contact Assessment

A summary of the two lines of evidence used in assessing the direct contact exposure pathways for each of the four watersheds is presented in **Table 7-15**. As discussed in **Section 7.1.2**, these lines of evidence included (1) comparing Tier 1 and 2 surface water and sediment EPCs with all readily available benchmarks for these media, and (2) modeling COPEC concentrations in fish tissue as a result of potential bioaccumulation from surface water or sediment, and comparing these tissue body burden concentrations with CBRs associated with potential adverse effects. For the weight-of-evidence evaluation, surface water COPECs that had concentrations that exceeded promulgated state and federal criteria, and those COPECs that exceeded a majority of the available benchmarks were considered for selection as final surface water COPECs. For those COPECs that exceeded at least one, but less than a majority, of the available benchmarks, a more detailed evaluation was performed.

For direct contact and fish body residue exposure pathways, 16 COPECs were identified in surface water and/or sediment among the four watersheds (**Table 7-15**) and are considered for selection as final COPECs (in **Section 10.0**), listed as follows:

Inorganics	**Organics**
Aluminum (surface water)	2,3,7,8-TCDD TEQ (surface water & sediment)
Barium (surface water)	BEHP (surface water and sediment)
Cadmium (surface water and sediment)	Carbon disulfide (sediment)
Copper (surface water and sediment)	
Iron (surface water)	
Lead (surface water)	
Manganese (surface water)	
Mercury (sediment)	
Nickel (sediment)	
Silver (sediment)	
Thallium (surface water)	
Vanadium (surface water and sediment)	
Zinc (surface water and sediment)	

It should be noted that chromium is not listed because the only evaluation criterion of potential concern (an HQ of 1.1 estimated for Harrison Bayou surface water using the Tier 1 NOAEL-based CBR approach) was deemed biologically insignificant.

Surface water and sediment COPECs are summarized in **Table 7-16**. It should be noted that the "O" symbol in the table indicates that none of the available evaluation criteria were exceeded or no adverse ecological impacts are predicted for aquatic receptors as a result of direct contact with or bioaccumulation of COPECs from surface water or sediment. The symbols "DC" and "F" in the table indicate that direct contact and/or fish exposure pathways, respectively, were a concern.

All four watersheds had at least one COPEC identified in either surface water or sediment that was retained for consideration as a final COPEC. Goose Prairie Creek watershed had the most COPECs identified (nine in surface water under the Tier 1 approach), while Saunders Branch watershed had the fewest number identified (two in surface water under the Tier 1 and 2 approaches). It should be noted that four COPECs (nickel, thallium, vanadium, and zinc) were only a concern based on modeled concentrations in fish tissue, and measured concentrations of these four inorganics were generally much lower than modeled concentrations (**Section 8.0**).

These COPECs are discussed in more detail in **Section 10.0**, where a recommendation based on multiple criteria (e.g., consideration of whether the chemical is background-related, comparison of modeled and measured fish tissue concentrations, etc.) is made as to whether these constituents should be selected as final COPECs at the end of Step 3.

7.2 Refined Food Chain Model

The primary objective of characterizing potential receptors and exposure routes is to develop a site conceptual model that describes exposure pathways and assists in defining how constituents present in site media may affect ecosystems relevant to the installation. The site conceptual model (**Figure 4-5**), in turn, summarizes potential exposures for ecological receptors to COPECs in soil, sediment, and surface water through uptake of these site constituents to food as estimated through use of a food chain model.

In Steps 1 and 2 (Jacobs, 2001a, 2002a, 2003a), a preliminary food chain model was developed that conservatively evaluated exposure to terrestrial and aquatic indicator species (i.e., Northern Bobwhite [avian granivore], American Woodcock [avian insectivore], Short-Tailed Shrew [mammalian insectivore], White-Footed Mouse [mammalian omnivore], Red-Tailed Hawk [avian carnivore], Belted Kingfisher [avian piscivore], Osprey [avian piscivore], Alligator Snapping Turtle [reptilian carnivore] and River Otter [mammalian carnivore]). Many of the assumptions used in the preliminary food chain model are considered conservative because site-specific information was lacking in the preliminary stages of the ERA and conservative assumptions were used in their place (i.e., maximum media concentrations, 100 percent AUF, 100 percent bioavailability, 100 percent of diet consisting of most contaminated food, and use of lowest body weights and highest ingestion rates were used). As a result of these conservative assumptions, these preliminary food chain models overestimated exposure. During Step 3, the assumptions used in earlier stages of the risk assessment are compared with values reported in the literature, and new hazard estimates are calculated using more realistic (but still conservative) assumptions (USEPA, 1997a).

Meetings with regulators (July 2002 and November 2002 workshops, November and December 2003 meetings and conference calls) and comments on Site 16 and Group 2 screening ERAs resulted in a quantitative evaluation of the food chain models and a refined set of exposure assumptions. These assumptions included information on refined species-specific soil depths, dietary compositions, life history parameters, and uptake factors. Life history information for the measurement receptors regarding body weights, soil ingestion rates, food ingestion rates, dietary composition, and home range is provided in **Table 7-17**.

The refined food chain models for LHAAP thus use more realistic, but still conservative, assumptions for calculation of exposure doses to the final list of measurement receptors that were selected for food chain modeling for the Installation-Wide ERA. The following receptors (i.e., "measurement receptors"; see **Section 4.2**) were selected to represent critical ecological assessment endpoints by acting as representatives for specific feeding guilds that occur at the installation:

- Deer Mouse (mammalian herbivore)
- Raccoon (mammalian omnivore) (the raccoon was evaluated twice; see the following text)
- Short-Tailed Shrew (mammalian insectivore)
- Red Fox (mammalian carnivore)
- Muskrat (mammalian herbivore)
- River Otter (mammalian carnivore)
- Townsend's Big-Eared Bat (mammalian insectivore)
- Common Snapping Turtle (reptilian carnivore)
- Bank Swallow (avian insectivore)
- American Woodcock (avian insectivore)
- Belted Kingfisher (avian piscivore)
- Red-Tailed Hawk (avian carnivore)
- Fathead Minnow (aquatic herbivore)
- Brown Bullhead catfish (aquatic omnivore)
- Terrestrial Plants
- Terrestrial Invertebrates

It should be noted that the selection of terrestrial plants and invertebrates as measurement receptors is a project-specific deviation of Army policy. These receptors are included at the request of regulatory agencies, and are evaluated for informational purposes only. Remedial activities or additional study of chemicals will not be targeted for the purposes of further characterizing or reducing hazard to these organisms alone.

The Raccoon was evaluated twice as a measurement receptor: once to represent the mammalian omnivore guild in general, and once to represent a larger, “bear-like” omnivore for the purposes of evaluating hazard to the Louisiana Black Bear. The latter measurement receptor is referred to as the “Raccoon (Louisiana Black Bear)”. The values selected for the various exposure variables (e.g., food ingestion rate) for the Raccoon (Louisiana Black Bear) were obtained from the range of values for the Raccoon (**Table 7-17**), but were selected to most closely represent a bear. As such, the following exposure assumptions were used for the Raccoon (Louisiana Black Bear) exposure scenario:

- ***Body weight.*** The same (i.e., average) body weight was used as for the Raccoon.
- ***Food Intake.*** Intake rates per unit body mass decrease with increasing body mass (USEPA, 1993). The average body weight of male and female Louisiana Black Bears is approximately 230 pounds (Extension Service of Mississippi State University [ESMSU], 2005). Using the allometric food ingestion equation from USEPA (1993) based on this body weight results in a food ingestion rate of 3.072 kilograms per day (kg/day), which is equivalent to 2.9 percent of the bear’s body weight per day. Applying this factor to the average body weight of the raccoon (5.78 kilograms [kg]) results in a daily food ingestion rate for the Raccoon (Louisiana Black Bear) of 0.167 kg/day. Because this is lower than the minimum ingestion rate for the Raccoon of 0.171 kg/day, the minimum Raccoon ingestion rate is adopted for the Raccoon (Louisiana Black Bear).
- ***Water Intake.*** The Raccoon water intake rate of 0.476 liters per day (L/day) was retained for the Raccoon (Louisiana Black Bear) water intake because this represents a water intake rate of approximately 0.08 L/kg body weight, which is similar to the black bear water ingestion rate of 0.06 L/kg body weight (Hazardous Waste Identification Rule [HWIR]) (USEPA, 1999c).
- ***Home Range.*** The Louisiana Black Bear home range is approximately 18,000 to 40,000 acres (7300 to 16,200 hectares; ESMSU, 2005). Therefore, the maximum Raccoon home range of 814 hectares is used for the Raccoon (Louisiana Black Bear).
- ***Diet.*** The same diet for the Raccoon is used for the Raccoon (Louisiana Black Bear).
- ***Soil Ingestion.*** HWIR (USEPA, 1999c) recommends a value of 2.8 percent of food intake for soil ingestion for the black bear. Applying this factor to the food intake rate of 0.0171 kg/day (see above), the soil intake rate for the Raccoon (Louisiana Black Bear) is estimated at 0.0048 kg/day. Similar to the Raccoon receptor, 50

percent of "soil" ingestion is assumed to be soil, and 50 percent is assumed to be sediment.

In addition to a Tier 1 evaluation that used reasonably conservative exposure assumptions, a Tier 2 model was also executed using a set of less conservative exposure assumptions based on central tendencies or means to calculate EEQs (TNRCC, 2001). It should be noted that the Tier 2 model incorporates central-tendency assumptions that are not directly supported by relevant site-specific data; as such, the Tier 2 models do not meet the criteria generally required of lines of evidence used to refine the list of chemicals that are carried forward to a BERA. Therefore, the Tier 2 results are presented here for informational purposes only, and are not used in the decision process for selecting final COPECs at LHAAP. The following parameters were refined in the Step 3 Tier 1 and Tier 2 food chain models:

- Exposure Point Concentrations – Screening ERAs used MDCs in soil, surface water and sediment. The Step 3 food chain models use the 95 percent UCL (or MDC, if the data set for a chemical includes five or fewer samples) in soil, surface water, and sediment for Tier 1 and the average (i.e., arithmetic mean) concentrations for Tier 2.

- Ingestion Rates – Screening ERAs used maximum ingestion rates (soil, water, and food). The Step 3 food chain models used average ingestion rates for both Tier 1 and Tier 2.

- Body Weight - Screening ERAs used minimum body weight. The Step 3 food chain models use average body weights for both Tier 1 and 2.

- Diet Composition – Screening ERAs assumed 100 percent of the diet from a single source. The Step 3 food chain models use diet composition from multiple food sources based on available information for each measurement receptor.

- Uptake Factors – Screening ERAs included uptake factors for 12 terrestrial COPECs and nine aquatic COPECs. The Step 3 food chain models include uptake factors for all chemicals. The Step 3 food chain models use upper-bound (e.g., 90^{th} percentile) uptake factors for Tier 1 and average uptake factors for Tier 2.

- Area Use – Screening ERAs assumed 100 percent area use. The Step 3 food chain models use values less than 100 percent as appropriate based on the ratio of home range or feeding/foraging range, to the affected site. The Tier 1 food chain models estimate area exposure used using the minimum home range for each receptor, while the Tier 2 models use the average home range.

- Bioavailability – Screening ERAs assumed 100 percent bioavailability. The Step 3 food chain models also assume 100 percent bioavailability because no information was available that supported an assumption of lower bioavailability. In **Section 10.0**, however, bioavailability is addressed for some COPECs by evaluating the form of the COPEC likely present at the installation versus the form used for developing TRVs (e.g., metallic lead vs. lead acetate).

- Exposure Duration – Screening ERAs assumed 100 percent ED. The Step 3 food chain models also assume 100 percent ED because no information was available that supported an assumption of lower ED.

The refined food chain models include all constituents identified as preliminary COPECs (**Section 6.3**).

7.2.1 Exposure Point Concentrations

For COPECs retained through the screening process (i.e., preliminary COPECs), representative EPCs were calculated for each individual receptor species. Tier 1 and Tier 2 EPCs were developed for the two primary iterations of the chain model.

The 95 percent UCL or the MDC (if the chemical had five or fewer detections) of a COPEC was used as the EPC for Tier 1. Thus, the EPC for the Tier 1 models is the same as the screening concentration used during the identification of preliminary COPECs (except for non-burrowing receptors, which used the surface soil database rather than the total soil database; see below). The mean concentration of a COPEC was used as the Tier 2 EPC. The 95 percent UCL and mean are used to represent upper bound and central tendency EPCs, which provide a range of exposures for consideration by risk managers. This approach is consistent with USEPA (1997a) guidance, which recommends that risk estimates be based on a range of values for each input variable.

Two types of EPCs were developed for chemicals in the soil medium. EPCs based on data from total soil samples (i.e., 0 to 3 feet bgs) were used for burrowing receptors (i.e., the Short-Tailed Shrew and Red Fox). EPCs based on data from surface soil samples (i.e., 0 to 0.5 feet bgs) were used for non-burrowing receptors (i.e., all receptors except the shrew and fox). The EPCs for all preliminary COPECs are provided in **Table 7-18**.

7.2.2 Exposure Equations

Exposure to COPECs was quantified for each of the selected measurement receptor species. Exposure for terrestrial wildlife such as birds and mammals is expressed in terms of dose (milligrams per kilogram [mg/kg] body weight-day). The equations used to estimate exposure doses are specific for each receptor, including herbivores (Deer Mouse, Muskrat), omnivores (Raccoon, Common Snapping Turtle), insectivores (Short-Tailed Shrew, American Woodcock, Bank Swallow), and carnivores (Red Fox, Red-Tailed Hawk, River Otter, Belted Kingfisher). The equations consider exposures to soil, surface water, sediment, and food for each identified receptor species. The equations presented are based on the general dose equations provided in TCEQ guidance (TNRCC, 2001).

<u>Deer Mouse (*Peromyscus maniculatus*); Mammalian Herbivore</u>

Although deer mice are omnivorous and highly opportunistic, which leads to substantial regional and seasonal variation in their diet, they are evaluated as a herbivore for purposes of this evaluation. They eat principally seeds, some green vegetation, roots, fruits, fungi and soil arthropods as available. Although the non-seed plant material provides a significant proportion of the Deer Mouse's daily water requirements, the Deer Mouse is assumed to ingest water. Due to its habit of living in direct contact with soils during foraging, resting, nesting and movement, this species was assumed to have incidental ingestion of soil. The exposure dose to the Deer Mouse was estimated using the following equation for terrestrial herbivores as based on TCEQ general guidance (TNRCC, 2001):

$$HD_T = [(PC_{TP} \times IR_{TP} \times BF_{TP}) + (IC_{SI} \times IR_{SI} \times BF_{SI}) + (SC \times IR_S \times BF_S) + (WC \times IR_W)] \times ED \times AUF / BW$$

Equation 7-1

where:

- HD_T = estimated exposure dose to a terrestrial herbivore via the food chain (mg/kg/day)
- PC_{TP} = concentration of contaminant in terrestrial plants (milligrams per gram [mg/g])
- IR_{TP} = ingestion rate of terrestrial plants (grams per day [g/day])
- BF_{TP} = bioavailability factor for terrestrial plants (unitless)
- IC_{SI} = concentration of contaminant in soil invertebrates (mg/g)
- IR_{SI} = ingestion rate of soil invertebrates (g/day)
- BF_{SI} = bioavailability factor for soil invertebrates (unitless)
- SC = concentration of contaminant in soil (mg/g)
- IR_S = ingestion rate of soil (g/day)
- BF_S = bioavailability factor for soil (unitless)
- WC = concentration of contaminant in water (mg/L)
- IR_W = ingestion rate of water (L/day)
- ED = exposure duration (fraction of year in which exposure could occur)
- AUF = area use factor (unitless ratio of exposure area to home range)
- BW = body weight (kg)

<u>Raccoon (*Procyon lotor*); Mammalian Omnivore</u>

The Raccoon is an omnivorous and opportunistic feeder. Raccoons feed primarily on fleshy fruits, nuts, acorns and corn but also eat grains, insects, frogs, crayfish, fish, eggs, and virtually any animal or vegetable matter. The proportion of different foods in their diet depends on location and season, although plants are usually a more important component of the diet (USEPA, 1993b). Typically, it is only in the spring and early summer that Raccoons eat more animal than plant material. Their late summer and fall diets consist primarily of fruits. In winter, acorns tend to be the most important food, but Raccoons will consume almost any foods that are still available. Because the Raccoon spends a considerable amount of time foraging in both terrestrial and aquatic habitats and due to its feeding habit of washing benthic invertebrates along the shoreline, this species is also assumed to have significant ingestion of soil, sediment and surface water. The exposure dose to the Raccoon was estimated using the following equation for terrestrial omnivores as based on TCEQ general guidance (TNRCC, 2001):

$$OD_T = [(PC_{TP} \times IR_{TP} \times BF_{TP}) + (IC_{SI} \times IR_{SI} \times BF_{SI}) + (IC_{AI} \times IR_{AI} \times BF_{AI}) + (FC \times IR_F \times BF_F) + (SMC \times IR_{SM} \times BF_{SM}) + (SC \times IR_S \times BF_S) + (SedC \times IR_{Sed} \times BF_{Sed}) + (WC \times IR_W)] \times ED \times AUF / BW$$

Equation 7-2

where:

- OD_T = estimated exposure dose to a terrestrial omnivore via the food chain (mg/kg/day)
- PC_{TP} = concentration of contaminant in terrestrial plants (mg/g)
- IR_{TP} = ingestion rate of terrestrial plants (g/day)
- BF_{TP} = bioavailability factor for terrestrial plants (unitless)
- IC_{SI} = concentration of contaminant in soil invertebrates (mg/g)
- IR_{SI} = ingestion rate of soil invertebrates (g/day)
- BF_{SI} = bioavailability factor for soil invertebrates (unitless)
- IC_{AI} = concentration of contaminant in aquatic invertebrates (mg/g)
- IR_{AI} = ingestion rate of aquatic invertebrates (g/day)
- BF_{AI} = bioavailability factor for aquatic invertebrates (unitless)
- FC = concentration of contaminant in fish (mg/g)
- IR_F = ingestion rate of fish (g/day)
- BF_F = bioavailability factor for fish (unitless)
- SMC = concentration of contaminant in small mammals (mg/g)
- IR_{SM} = ingestion rate of small mammals (g/day)
- BF_{SM} = bioavailability factor for small mammals (unitless)
- SC = concentration of contaminant in soil (mg/g)
- IR_S = ingestion rate of soil (g/day)
- BF_S = bioavailability factor for soil (unitless)
- SedC = concentration of contaminant in sediment (mg/g)
- IR_{Sed} = ingestion rate of sediment (g/day)
- BF_{Sed} = bioavailability factor for sediment (unitless)
- WC = concentration of contaminant in water (mg/L)
- IR_W = ingestion rate of water (L/day)
- ED = exposure duration (fraction of year in which exposure could occur)
- AUF = area use factor (unitless ratio of exposure area to home range)
- BW = body weight (kg)

Because the raccoon is considered both an aquatic and terrestrial forager, it was assumed that 50 percent of the soil ingestion component of the intake model consisted of soil and 50 percent consisted of sediment.

Short-Tailed Shrew (*Blarina Carolinas*); Mammalian Insectivore

The Short-Tailed Shrew is primarily carnivorous (insectivorous). Analyses of stomach contents indicate that insects, earthworms, slugs, and snails make up most of the shrew's food. Although plants, fungi, millipedes, centipedes, arachnids, and small mammals are also consumed, these foods are expected to compose less than five percent of the shrew's diet. The shrew must consume water to compensate for its high evaporative water loss. In addition, due to its habit of living in direct contact with soils during foraging, resting, nesting, and movement, this species was assumed to have incidental ingestion of soil. The exposure dose to the shrew was estimated using the following equation for terrestrial insectivores as based on TCEQ general guidance (TNRCC, 2001):

$$ID_T = [(EWC \times IR_{EW} \times BF_{EW}) + (IC_{SI} \times IR_{SI} \times BF_{SI}) + (SC \times IR_S \times BF_S) + (WC \times IR_W)] \times ED \times AUF / BW$$

Equation 7-3

where:

- ID_T = estimated exposure dose to a terrestrial insectivore via the food chain (mg/kg/day)
- EW_C = concentration of contaminant in earthworms (mg/g)
- IR_{EW} = ingestion rate of earthworms (g/day)
- BF_{EW} = bioavailability factor for earthworms (unitless)
- IC_{SI} = concentration of contaminant in soil invertebrates (mg/g)
- IR_{SI} = ingestion rate of soil invertebrates (g/day)
- BF_{SI} = bioavailability factor for soil invertebrates (unitless)
- SC = concentration of contaminant in soil (mg/g)
- IR_S = ingestion rate of soil (g/day)
- BF_S = bioavailability factor for soil (unitless)
- WC = concentration of contaminant in water (mg/L)
- IR_W = ingestion rate of water (L/day)
- ED = exposure duration (fraction of year in which exposure could occur)
- AUF = area use factor (unitless ratio of exposure area to home range)
- BW = body weight (kg)

Red Fox *(Vulpes vulpes)*; Mammalian Carnivore

The Red Fox is primarily carnivorous, preying predominantly on small mammals, but they also may eat insects, fruits, berries, seeds, and nuts. They are foraging generalists that actively seek their prey. Game birds and waterfowl are seasonally important in some areas. Plant material is most often found in Red Fox diets during the summer and fall when fruits, berries and nuts become available. Other foods may include insects; however, these foods are expected to compose less than five percent of the Red Fox's diet. The Red Fox usually maintains an underground den and one or more other burrows within the home range. Consequently, this receptor was assumed to have incidental ingestion of soil. It is assumed that the Red Fox drinks water to meet its daily requirements. The exposure dose to the Red Fox was estimated using the following equation for terrestrial carnivores as based on TCEQ general guidance (TNRCC, 2001):

$$CD_T = [(SMC \times IR_{SM} \times BF_{SM}) + (GBC \times IR_{GB} \times BF_{GB}) + (PC_{TP} \times IR_{TP} \times BF_{TP}) + (SC \times IR_S \times BF_S) + (WC \times IR_W)] \times ED \times AUF / BW$$

Equation 7-4

where:

- CD_T = estimated exposure dose to a terrestrial carnivore via the food chain (mg/kg/day)
- SMC = concentration of contaminant in small mammals (mg/g)
- IR_{SM} = ingestion rate of small mammals (g/day)
- BF_{SM} = bioavailability factor for small mammals (unitless)
- GBC = concentration of contaminant in game birds (mg/g)
- IR_{GB} = ingestion rate of game birds (g/day)
- BF_{GB} = bioavailability factor for game birds (unitless)
- PC_{TP} = concentration of contaminant in terrestrial plants (mg/g)
- IR_{TP} = ingestion rate of terrestrial plants (g/day)
- BF_{TP} = bioavailability factor for terrestrial plants (unitless)
- SC = concentration of contaminant in soil (mg/g)
- IR_S = ingestion rate of soil (g/day)
- BF_S = bioavailability factor for soil (unitless)
- WC = concentration of contaminant in water (mg/L)
- IR_W = ingestion rate of water (L/day)
- ED = exposure duration (fraction of year in which exposure could occur)
- AUF = area use factor (unitless ratio of exposure area to home range)
- BW = body weight (kg)

Common Muskrat *(Ondatra zibethicus)*; Mammalian Herbivore

The Muskrat is primarily herbivorous. Muskrats typically feed at night on aquatic vegetation. The roots and basal portions of aquatic plants make up most of the Muskrats diet, although shoots, bulbs, tubers, stems and leaves are also consumed. Muskrats are a major consumer of marsh grasses, and young Muskrats feed on more bank vegetation than adults. Although Muskrats are also known to consume crayfish, fish, frogs, turtles and young birds, these foods make up less than five percent of the typical diet. Due to the Muskrat’s feeding habits, it was assumed that there is incidental ingestion of sediment and ingestion of surface water. The exposure dose to the Muskrat was estimated using the following equation for aquatic herbivores as based on TCEQ general guidance (TNRCC, 2001):

$$HD_A = [(PC_{AP} \times IR_{AP} \times BF_{AP}) + (PC_{TP} \times IR_{TP} \times BF_{TP}) + (SedC \times IR_{Sed} \times BF_{Sed}) + (WC \times IR_W)] \times ED \times AUF / BW$$

Equation 7-5

where:

- HD_A = estimated exposure dose to an aquatic herbivore via the food chain (mg/kg/day)
- PC_{AP} = concentration of contaminant in aquatic plants (mg/g)

IR_{AP} = ingestion rate of aquatic plants (g/day)
BF_{AP} = bioavailability factor for aquatic plants (unitless)
PC_{TP} = concentration of contaminant in terrestrial plants (mg/g)
IR_{TP} = ingestion rate of terrestrial plants (g/day)
BF_{TP} = bioavailability factor for terrestrial plants (unitless)
SedC = concentration of contaminant in sediment (mg/g)
IR_{Sed} = ingestion rate of sediment (g/day)
BF_{Sed} = bioavailability factor for sediment (unitless)
WC = concentration of contaminant in water (mg/L)
IR_{W} = ingestion rate of water (L/day)
ED = exposure duration (fraction of year in which exposure could occur)
AUF = area use factor (unitless ratio of exposure area to home range)
BW = body weight (kg)

The vegetation portion of the muskrat diet was assumed to consist of 90 percent aquatic vegetation, and 10 percent terrestrial vegetation (USEPA, 1993). Fifty percent of the aquatic vegetation was assumed to be plant roots.

River Otter (*Lutra canadensis*); Mammalian Carnivore

The River Otter is an aquatic carnivore, whose diet is comprised mostly of fish. River Otters are opportunistic foragers, however, and may feed on a variety of prey (e.g., crustaceans, aquatic invertebrates, amphibians, birds, etc.) depending on availability. River Otters probe the bottoms of ponds and streams for food, and may ingest mud or other debris in the process; therefore, it was assumed that there is incidental ingestion of sediment and ingestion of surface water. The exposure dose to the River Otter was estimated using the following equation for aquatic carnivores as based on TCEQ general guidance (TNRCC, 2001):

$$CD_A = [(FC \times IR_F \times BF_F) + (GBC \times IR_{GB} \times BF_{GB}) + (IC_{AI} \times IR_{AI} \times BF_{AI}) + (SedC \times IR_{Sed} \times BF_{Sed}) + (WC \times IR_W)] \times ED \times AUF / BW$$

Equation 7-6

where:

CD_A = estimated exposure dose to an aquatic carnivore via the food chain (mg/kg/day)
FC = concentration of contaminant in fish (mg/g)
IR_F = ingestion rate of fish (g/day)
BF_F = bioavailability factor for fish (unitless)
GBC = concentration of contaminant in game birds (mg/g)
IR_{GB} = ingestion rate of game birds (g/day)
BF_{GB} = bioavailability factor for game birds (unitless)
IC_{AI} = concentration of contaminant in aquatic invertebrates (mg/g)
IR_{AI} = ingestion rate of aquatic invertebrates (g/day)
BF_{AI} = bioavailability factor for aquatic invertebrates (unitless)
SedC = concentration of contaminant in sediment (mg/g)
IR_{Sed} = ingestion rate of sediment (g/day)
BF_{Sed} = bioavailability factor for sediment (unitless)

WC = concentration of contaminant in water (mg/L)
IR_W = ingestion rate of water (L/day)
ED = exposure duration (fraction of year in which exposure could occur)
AUF = area use factor (unitless ratio of exposure area to home range)
BW = body weight (kg)

Townsend's Big-Eared Bat (*Corynorhinus townsendii*); Mammalian Insectivore

The Townsend's Big-Eared Bat is a terrestrial insectivore whose diet is comprised almost entirely of moths. Townsend's Big-Eared bats tend to forage in forested areas (as opposed to open or grassy areas), and favored habitat includes mesic areas characterized by coniferous and mixed forests. Preferred roosting areas include caves, abandoned buildings, and tree cavities. Activity usually begins well into the night. Like all bats, foraging is achieved using echo-location, and insect capture is entirely in the air. Therefore, no direct soil ingestion component is included for this receptor. Also, no moth uptake factors are available. The use of uptake factors for other terrestrial invertebrates (i.e., earthworms) was not considered appropriate for estimating uptake into moths because the studies that form the basis of those uptake factors are typically based on organisms with very different life histories and much more intimate contact with soil than moths. Moth caterpillars typically live on and ingest vegetation prior to forming a chrysalis, and emerging as moths. All moth growth takes place during the caterpillar stage; adults eat only for reproductive purposes. Few data are available for estimating uptake of vegetation into invertebrates. Therefore, it was assumed that the ingestion of moths by the bat was equivalent to the bat directly ingesting vegetation (i.e., a one-to-one relationship between chemicals in plants and in moths was assumed). Thus, the exposure dose to the Townsend's Big-Eared Bat was estimated using the following equation for terrestrial herbivores as based on TCEQ general guidance (TNRCC, 2001):

$$HD_T = [(PC_{TP} \times IR_{TP} \times BF_{TP}) + (WC \times IR_W)] \times ED \times AUF / BW \qquad \textbf{Equation 7-7}$$

where:

HD_T = estimated exposure dose to a terrestrial herbivore via the food chain (mg/kg/day)
PC_{TP} = concentration of contaminant in terrestrial plants (mg/g)
IR_{TP} = ingestion rate of terrestrial plants (g/day)
BF_{TP} = bioavailability factor for terrestrial plants (unitless)
WC = concentration of contaminant in water (mg/L)
IR_W = ingestion rate of water (L/day)
ED = exposure duration (fraction of year in which exposure could occur)
AUF = area use factor (unitless ratio of exposure area to home range)
BW = body weight (kg)

<u>Common Snapping Turtle *(Chelydra sepentina)*; Reptilian Omnivore</u>

The Snapping Turtle is omnivorous. In early spring, when limited aquatic vegetation exists in lakes and ponds, they primarily consume animal matter. When aquatic vegetation become more abundant, the Snapping Turtle becomes more herbivorous. Snapping Turtles consume a wide variety of animal foods, including insects, crustaceans, clams, snails, fish, frogs, birds, and small mammals. Plant foods include various types of aquatic vegetation and algae. Because of the Snapping Turtle's habit of spending most of its time lying on the bottom of deep pools or buried in mud in shallow water, it was assumed that there is incidental ingestion of sediment and ingestion of surface water. The exposure dose to the Common Snapping Turtle was estimated using the following equation for aquatic omnivores as based on TCEQ general guidance (TNRCC, 2001):

$$OD_A = [(PC_{AP} \times IR_{AP} \times BF_{AP}) + (IC_{AI} \times IR_{AI} \times BF_{AI}) + (FC \times IR_F \times BF_F) + (SMC \times IR_{SM} \times BF_{SM}) + (SedC \times IR_{Sed} \times BF_{Sed}) + (WC \times IR_W)] \times ED \times AUF / BW$$

Equation 7-8

where:

- OD_A = estimated exposure dose to an aquatic omnivore via the food chain (mg/kg/day)
- PC_{AP} = concentration of contaminant in aquatic plants (mg/g)
- IR_{AP} = ingestion rate of aquatic plants (g/day)
- BF_{AP} = bioavailability factor for aquatic plants (unitless)
- IC_{AI} = concentration of contaminant in aquatic invertebrates (mg/g)
- IR_{AI} = ingestion rate of aquatic invertebrates (g/day)
- BF_{AI} = bioavailability factor for aquatic invertebrates (unitless)
- FC = concentration of contaminant in fish (mg/g)
- IR_F = ingestion rate of fish (g/day)
- BF_F = bioavailability factor for fish (unitless)
- SMC = concentration of contaminant in small mammals (mg/g)
- IR_{SM} = ingestion rate of small mammals (g/day)
- BF_{SM} = bioavailability factor for small mammals (unitless)
- SedC = concentration of contaminant in sediment (mg/g)
- IR_{Sed} = ingestion rate of sediment (g/day)
- BF_{Sed} = bioavailability factor for sediment (unitless)
- WC = concentration of contaminant in water (mg/L)
- IR_W = ingestion rate of water (L/day)
- ED = exposure duration (fraction of year in which exposure could occur)
- AUF = area use factor (unitless ratio of exposure area to home range)
- BW = body weight (kg)

Bank Swallow *(Riparia riparia)*; Avian Insectivore

The Bank Swallow is primarily carnivorous (insectivorous). The Bank Swallow is an aerial foraging species that primarily feeds over open bodies of water. Because the Bank Swallow forages extensively over water, aquatic prey constitutes a significant portion of its diet. It was also assumed that a smaller percentage of terrestrial flying insects are consumed. Although some plant material is occasionally eaten, these foods are expected to compose less than five percent of the Bank Swallow's diet. Since Bank Swallows frequently nest in burrows located in earthen banks near water bodies, it was assumed that some contact and incidental ingestion of sediments and surface water may occur. The exposure dose to the Bank Swallow was estimated using the following equation for aquatic insectivores as based on TCEQ general guidance (TNRCC, 2001):

$$ID_A = [(IC_{AI} \times IR_{AI} \times BF_{AI}) + (IC_{SI} \times IR_{SI} \times BF_{SI}) + (SedC \times IR_{Sed} \times BF_{Sed}) + (WC \times IR_W)] \times ED \times AUF / BW$$

Equation 7-9

where:

- ID_A = estimated exposure dose to an aquatic insectivore via the food chain (mg/kg/day)
- IC_{AI} = concentration of contaminant in aquatic invertebrates (mg/g)
- IR_{AI} = ingestion rate of aquatic invertebrates (g/day)
- BF_{AI} = bioavailability factor for aquatic invertebrates (unitless)
- IC_{SI} = concentration of contaminant in soil invertebrates (mg/g)
- IR_{SI} = ingestion rate of soil invertebrates (g/day)
- BF_{SI} = bioavailability factor for soil invertebrates (unitless)
- SedC = concentration of contaminant in sediment (mg/g)
- IR_{Sed} = ingestion rate of sediment (g/day)
- BF_{Sed} = bioavailability factor for sediment (unitless)
- WC = concentration of contaminant in water (mg/L)
- IR_W = ingestion rate of water (L/day)
- ED = exposure duration (fraction of year in which exposure could occur)
- AUF = area use factor (unitless ratio of exposure area to home range)
- BW = body weight (kg)

American Woodcock (*Scolopax minor*); Avian Insectivore

The American Woodcock is an inland member of the sandpiper family that inhabit woodlands and abandoned fields. Both wooded areas and open fields are necessary for woodcocks, as they feed in woodland soil during the day, and roost in nearby fields at night. They are primarily insectivorous, with a diet consisting nearly entirely of earthworms. The American Woodcock is migratory throughout much of its range, but may be a year-round resident in the southeastern United States. The exposure dose to the American Woodcock was estimated using the following equation for terrestrial insectivores as based on TCEQ general guidance (TNRCC, 2001):

$$ID_T = [(IC_{SI} \times IR_{SI} \times BF_{SI}) + (SC \times IR_S \times BF_S) + (WC \times IR_W)] \times ED \times AUF / BW$$

Equation 7-10

where:

- ID_T = estimated exposure dose to a terrestrial insectivore via the food chain (mg/kg/day)
- IC_{SI} = concentration of contaminant in soil invertebrates (mg/g)
- IR_{SI} = ingestion rate of soil invertebrates (g/day)
- BF_{SI} = bioavailability factor for soil invertebrates (unitless)
- SC = concentration of contaminant in soil (mg/g)
- IR_S = ingestion rate of soil (g/day)
- BF_S = bioavailability factor for soil (unitless)
- WC = concentration of contaminant in water (mg/L)
- IR_W = ingestion rate of water (L/day)
- ED = exposure duration (fraction of year in which exposure could occur)
- AUF = area use factor (unitless ratio of exposure area to home range)
- BW = body weight (kg)

Belted Kingfisher *(Ceryle alcyon)*; Avian Carnivore

The Belted Kingfisher is primarily carnivorous (piscivorous). Belted Kingfishers generally feed on fish that swim near the surface or in shallow water. Although kingfishers feed predominantly on fish, they also consume crayfish, crabs, mussels, lizards, frogs, small snakes, turtles, insects, salamanders, young birds, and mice. Although some plant foods may also be consumed (e.g., berries), these foods are expected to compose less than five percent of the Belted Kingfisher's diet. Since kingfishers nest in burrows located in earthen banks devoid of vegetation near water bodies, it was assumed that some contact and incidental ingestion of sediments and surface water may occur. The exposure dose to the Belted Kingfisher was estimated using the following equation for aquatic carnivores as based on TCEQ general guidance (TNRCC, 2001):

$$CD_A = [(IC_{AI} \times IR_{AI} \times BF_{AI}) + (FC \times IR_F \times BF_F) + (SMC \times IR_{SM} \times BF_{SM}) + (SedC \times IR_{Sed} \times BF_{Sed}) + (WC \times IR_W)] \times ED \times AUF / BW$$

Equation 7-11

where:

- CD_A = estimated exposure dose to an aquatic carnivore via the food chain (mg/kg/day)
- IC_{AI} = concentration of contaminant in aquatic invertebrates (mg/g)
- IR_{AI} = ingestion rate of aquatic invertebrates (g/day)
- BF_{AI} = bioavailability factor for aquatic invertebrates (unitless)
- FC = concentration of contaminant in fish (mg/g)
- IR_F = ingestion rate of fish (g/day)
- BF_F = bioavailability factor for fish (unitless)
- SMC = concentration of contaminant in small mammals (mg/g)
- IR_{SM} = ingestion rate of small mammals (g/day)
- BF_{SM} = bioavailability factor for small mammals (unitless)
- SedC = concentration of contaminant in sediment (mg/g)
- IR_{Sed} = ingestion rate of sediment (g/day)
- BF_{Sed} = bioavailability factor for sediment (unitless)

WC = concentration of contaminant in water (mg/L)
IR_W = ingestion rate of water (L/day)
ED = exposure duration (fraction of year in which exposure could occur)
AUF = area use factor (unitless ratio of exposure area to home range)
BW = body weight (kg)

<u>Red-Tailed Hawk *(Buteo jamaicensis)*; Avian Carnivore</u>

The Red-Tailed Hawk is one of the most widely distributed hawks in the United States. It uses a broad range of habitats, from woodlands, wetlands, pastures, and prairies to deserts. Red-Tailed Hawks are primarily carnivorous, and their diet consists mostly of small mammals (e.g., mice, shrews, voles, and squirrels), although they are also known to eat birds, lizards, snakes, and fish. Red-tailed hawks in the southern part of the country tend to be year-round residents. The exposure dose to the Red-Tailed Hawk was estimated using the following equation for terrestrial carnivores as based on TCEQ general guidance (TNRCC, 2001):

$$CD_T = [(SMC \times IR_{SM} \times BF_{SM}) + (GBC \times IR_{GB} \times BF_{GB}) + (PC_F \times IR_F \times BF_F) + (SC \times IR_S \times BF_S) + (WC \times IR_W)] \times ED \times AUF / BW$$

Equation 7-12

where:

CD_T = estimated exposure dose to a terrestrial carnivore via the food chain (mg/kg/day)
SMC = concentration of contaminant in small mammals (mg/g)
IR_{SM} = ingestion rate of small mammals (g/day)
BF_{SM} = bioavailability factor for small mammals (unitless)
GBC = concentration of contaminant in game birds (mg/g)
IR_{GB} = ingestion rate of game birds (g/day)
BF_{GB} = bioavailability factor for game birds (unitless)
PC_F = concentration of contaminant in fish (mg/g)
IR_F = ingestion rate of fish (g/day)
BF_F = bioavailability factor for fish (unitless)
SC = concentration of contaminant in soil (mg/g)
IR_S = ingestion rate of soil (g/day)
BF_S = bioavailability factor for soil (unitless)
WC = concentration of contaminant in water (mg/L)
IR_W = ingestion rate of water (L/day)
ED = exposure duration (fraction of year in which exposure could occur)
AUF = area use factor (unitless ratio of exposure area to home range)
BW = body weight (kg)

7.2.3 Exposure Assumptions

The degree of potential exposure associated with each measurement receptor via each pathway is determined by behavioral, constituent, and physiological factors. Behavioral factors include the amount of time spent in contact with the COPECs in soil, water and sediment and the volume of material ingested. Constituent factors affecting the degree of exposure relate to the tendency for a chemical to be bioavailable in an environmental medium or food item, as well as the physical state of the constituent in the environment (e.g., solubilized in water vs. adsorbed to suspended material). Physiological parameters such as the ability of the organism to absorb, metabolize and eliminate the constituent also determine the amount and type of exposure that may occur. To quantify potential exposures in the ERA process, it is necessary to make assumptions regarding each of these factors. These assumptions are expressed as exposure factors and are specific to each receptor evaluated.

As discussed previously, potential risk or threat to an ecological receptor is estimated as a function of exposure, with the potential risk of adverse effects increasing as exposure increases. Information on the levels of exposure experienced by different members of a receptor population is important to understanding the range of potential risks that may occur. In order to describe the range of potential risks, both high-end and central-tendency estimates of exposure were used to convey the variability in potential risk levels experienced by different individuals in the population.

For each factor involved in the calculation of an exposure estimate, there is a range of values that may describe the magnitude of exposure, for a given organism. In many cases the state of the science is not yet adequate to define the distribution of all exposure factors that are used in the calculation of the exposure estimate. Consequently, the high-end and central-tendency values that are used for each exposure factor should be viewed as best approximations.

7.2.3.1 Ingestion Rates

Oral exposure experienced by wildlife may originate from multiple sources. They may consume contaminated food (either plant or animal), drink contaminated water, or ingest contaminated soil and/or sediment. Soil ingestion may be incidental while foraging or grooming or may be intentional to meet nutritional trace metal requirements.

Soil and Sediment Ingestion Rates. In addition to consuming food, many wildlife species consume soil and/or sediment. Soil/sediment consumption may occur inadvertently while foraging for food (i.e., predators of soil invertebrates ingesting soil adhering to insects, grazing herbivores consuming soil deposited on foliage) and grooming. Deliberate ingestion of soil by wildlife is also well documented. Many mammals purposefully ingest soil to meet dietary nutrient requirements (i.e., more than 50 species are known to visit salt licks). Many avian species consume grit to supplement their calcium intake or because it is abrasive and aids in digestion.

The assumptions of soil and sediment ingestion are specific to the receptor species evaluated. Information on soil/sediment ingestion is presented for each of the selected measurement receptors in **Table 7-17**. Information on soil/sediment ingestion was obtained primarily from the *Wildlife Exposure Factors Handbook* (USEPA, 1993). Other available literature was also reviewed for relevant information.

Water Ingestion Rates. The *Wildlife Exposure Factors Handbook* (USEPA, 1993) was consulted and used as the primary source for species-specific water ingestion rates. The open literature was also reviewed as necessary to obtain relevant species-specific water ingestion rates. In addition, allometric equations for estimating water ingestion rate as a function of body weight were used if literature sources could not be found.

The assumptions of water ingestion are specific to the receptor species evaluated. Information on water ingestion is presented for each of the selected measurement receptors in **Table 7-17**.

Food Consumption Rates. Field observations of food consumption rates are the best data to use to estimate exposure; however; these data are usually unavailable for wildlife measurement receptors used in ERAs. The second best data sets for estimating exposure are consumption rates for wildlife species reported in laboratory studies. Laboratory data, however, are of limited use because of the influence of ambient conditions, such as activity regimes and environmental variables (temperature, humidity, etc.) on metabolism, and, therefore, consumption rates from laboratory settings are generally inappropriate for wild species.

The assumptions of food intake are specific to the receptor species evaluated. Information on food composition is presented for each of the selected measurement receptors in **Table 7-17**. In the absence of experimental data, food consumption values can be estimated from allometric regression models based on metabolic rate. Nagy (1987) derived equations to estimate food consumption for various groups of birds and mammals:

- For passerine birds: $FI = 0.398\ Wt^{0.850}$
- For placental mammals: $FI = 0.235\ Wt^{0.822}$
- For rodents: $FI = 0.621\ Wt^{0.564}$

Where FI equals food intake (on a dry weight basis, in kg per day) and Wt equals body weight (in kg). With the exception of the raccoon and the river otter, the food ingestion rates were converted to a dry-weight basis by summing the dry-weight of each component in the receptor's diet (based on percent moisture data from Sample and Suter, 1994), weighted by the proportion of food in the diet. This dry-weight conversion for all receptors is illustrated in **Table 7-19**.

7.2.3.2 Body Weights

Body weights were obtained from the *Wildlife Exposure Factors Handbook* (USEPA, 1993) and other available sources. A range of reported body weights is presented in **Table 7-17**, and a representative body weight (e.g., average) was selected for each measurement receptor for use in the food chain models.

7.2.3.3 Diet Composition

Very few wildlife species have diets that consist exclusively of one food type. To meet nutritional needs for growth, maintenance, and reproduction, most wildlife species consume varying amounts of multiple food types. Because it is unlikely that all food types consumed will contain the same COPEC concentrations, diet composition is one of the most important exposure assumptions. To account for differences in COPEC concentrations of different food types, exposure estimates were weighted by the relative proportion of daily food consumption attributable to each food type and the COPEC concentration in each food type.

The assumptions of dietary composition are specific to the receptor species evaluated. Information on diet composition is presented for each of the selected measurement receptors in **Table 7-17**. Some measurement receptors are known to ingest reptiles/amphibians. However, uptake factors for reptiles/amphibians are not commonly available in the literature. Without uptake factors, exposure doses associated with ingestion of these organisms cannot be calculated. Therefore, portions of the diet associated with ingestion of reptiles/amphibians for all receptors were redistributed equally among other dietary components. Although this adds some uncertainty to the Step 3 evaluation, the level of uncertainty is small because reptiles/amphibians do not comprise a large percentage of any receptor's diet (the maximum percentage was eight percent for the Red-Tailed Hawk).

7.2.3.4 Concentrations in Food Items

The oral exposure for wildlife is equal to the amount of COPEC that is ingested or consumed in the diet that is taken up or transferred from the environmental media of concern. Therefore, it is necessary to model the uptake from a particular environmental medium to the animal or plant material that is consumed by the measurement receptor species. Uptake factors, which are also referred to as BAFs or BCFs, are multipliers used to calculate the concentration of COPECs in food items from abiotic media. An uptake factor was developed for each COPEC. If an appropriate uptake factor could not be obtained from the literature for a COPEC or surrogate COPEC, a value was calculated based on available regression equations and data. The selection of uptake factors was generally based on a systematic hierarchy of sources rather than on a chemical-by-chemical basis. Therefore, occasionally a more realistic uptake factor may have been ignored in favor of one that was more consistent with the hierarchical selection process. The selection of final COPECs (**Section 10.0**) considers the effect of using alternate uptake factors in the execution of the food chain models. Uptake factors were converted to a dry-weight basis, when necessary, to correspond to the dietary intake component of the food chain models, which use dry-weights for the food ingestion parameter (**Section 7.2.3.1**).

Uptake in Aquatic and Terrestrial Plants (Trophic Level 1). In general, when uptake by plants is considered, COPECs may be present in plants largely as a result of COPEC transfer from the soil-to-soil pore water and ultimately into the plants. When aquatic plants are considered, the same general mechanism for uptake exists, i.e., uptake of COPECs from surface water and sediment into the plants.

To model uptake in rooted aquatic plants and terrestrial plants, the COPEC concentration in terrestrial plants (PC_T) and aquatic plants (PC_A) were calculated by multiplying the COPEC concentration in the media by the BCFs for the COPEC. Plant uptake factors were based on the best information available from the literature. For the purposes of Step 3, plant uptake factors were based on available literature or values calculated using regression equations because actual site-specific tissue samples were not available. The transfer of constituents to different parts of plants is highly variable according to the constituent and specific plant. Some constituents are known to accumulate in roots, some in leaves, others in seed or fruits, etc. Information was not generally available in the literature regarding specific uptake factors for specific parts of plants, and in some cases, plant uptake factors available from published sources did not provide specific information regarding for what part of the plant the uptake factor was developed. Therefore, plant uptake factors for specific parts of plants were not developed for the Step 3 evaluation. The ingestion of plant roots is a significant part of the diet of some receptors, particularly the muskrat. Therefore, the ingestion of plant roots were included in the food chain models as a separate food component in the eventuality that root-specific uptake factors are developed in the future. However, for this Step 3 report, it was assumed that the uptake of soil (or sediment) COPECs to plant roots was the same as the uptake for the entire plant.

Soil-to-plant and sediment-to-plant BCFs were obtained from a number of sources, including TCEQ guidance (Figure 30 Texas Administrative Code [TAC] 350.73(e)), USEPA's *Ecological Soil Screening Level Guidance* (USEPA, 2005), International Atomic Energy Agency (IAEA) (1994), and Baes et al. (1984). Chemical-specific regression equations that are dependent on the COPEC concentration in soil provided in Efroymson et al. (2001) and Sample et al. (2005) were also used. If a BCF for an organic COPEC was not available in other references, the BCF was calculated from the following regression equation (Travis and Arms, 1988):

$$\text{Log BCF} = 1.588 - 0.578 \times \log \text{Kow} \qquad \textbf{Equation 7-13}$$

Best professional judgment was used to select Tier 1 and Tier 2 BCFs. The regression equations from Efroymson et al. (2001) were used for inorganic chemicals when available for both Tier 1 and Tier 2 because these models are based on actual site concentrations and likely represent the most accurate BCFs available. For inorganic chemicals that lacked regression equations, and for organic chemicals, an upper-bound (e.g., 90^{th} percentile value from USEPA [2005]) BCF was selected as the Tier 1 value, and a median value was selected as the Tier 2 value to provide a range of potential uptake scenarios. For inorganic chemicals that lacked readily-available BCFs (i.e., nitrate, strontium, and sulfate), the upper 95 percent UCL and the arithmetic mean of the BCFs for other inorganic chemicals for which values were available were used as the Tier 1 and Tier 2 BCFs, respectively.

It was assumed that uptake was the same for soil-to-plants and sediment-to-aquatic plants.

The BCFs for soil-to-plant uptake are presented in **Table 7-20**.

Uptake in Herbivores, Omnivores and Carnivores (Trophic Levels 2, 3, and 4). Uptake of COPECs in the diet of the higher trophic levels is a function of the types of food items ingested and the concentration of COPECs in each food item.

Earthworms and Soil Invertebrates. In Step 3, concentrations of COPECs in earthworms and soil invertebrates were estimated using soil-to-soil invertebrate BCFs obtained from the literature. For inorganic chemicals (e.g., cadmium), a chemical-specific regression equation based on the site-specific soil concentration was used as both the Tier 1 and Tier 2 BCF when available (Sample et al., 1999). For other inorganic chemicals and organic chemicals, the 90^{th} percentile and median values from Sample and others (1998) were used for the Tier 1 and Tier 2 BCFs, respectively, when available. For inorganic chemicals that lacked BCFs from Sample et al. (1998), the geometric mean of the 90^{th} percentile and median inorganic BCFs, respectively, from Sample et al. (1998) were assigned as the Tier 1 and Tier 2 BCFs.

The literature was reviewed to develop an appropriate model for soil-to-soil invertebrate BCFs for organic chemicals. Connell and Markwell (1990) presented a three phase model for describing movement of chemicals from soil-to-soil pore water to earthworms. The BCF, which accounts for the transfer of the chemical into the pore water can be described as follows:

$$BCF = \left(Kow^{b-a} \times F_{lipid}\right) / K \times Foc \qquad \textbf{Equation 7-14}$$

Where:

BCF	=	Bioconcentration factor
Kow	=	Octanol-water partition coefficient for the chemical
b-a	=	Non-linearity constant (0.05)
F_{lipid}	=	Fraction of lipids in earthworms (generally assumed to be 0.02)
K	=	Proportionality constant (0.66)
Foc	=	Fraction of organic carbon in the soil

The numerator of this equation describes the transfer of chemicals from pore water into the earthworm tissue (i.e., the biota to soil pore water partitioning coefficient), while the denominator describes the soil-to-water partitioning coefficient. However, recent data indicate that the regression equation described in Connell and Markwell (1990) may not be consistent with the lipid fraction in worms and it was found to be flawed, according to Jager (1998). The alternative approach used by Jager (1998) is a more appropriate method because it is based on actual laboratory and/or field studies. The Connell and Markwell (1990) approach used in the Eco-SSL Guidance (USEPA, 2000) has been updated in the revised Eco-SSL Guidance (USEPA, 2005) to use the Jager approach. Furthermore, USEPA (2005) reviewed the data presented in Connell and Markwell, and developed a different equation using the same data:

$$BCF = \frac{10^{(\log Kow - 0.6)}}{Foc \times 10^{(0.983*\log Kow + 0.00028)}}$$ **Equation 7-15**

Again, the transfer of the chemical from pore water to earthworm tissue is described in the numerator, and from soil to pore water in the denominator. However, the USEPA (2005) equation (above) was used for the purpose of developing soil screening levels, and calculated BCFs using the USEPA equation result in uptake factors that are likely to be overly conservative for a Step 3 evaluation.

An alternative equation for calculating the pore water to worm partitioning coefficient ($K_{worm-water}$) is presented by Jager (1998), as follows:

$$K_{worm-water} = F_{water} + F_{lipid} Kow$$ **Equation 7-16**

The water phase (F_{water}) component of this equation is used to approximate a thermodynamic equilibrium where the water phase inside the organism can be expected to reach the same concentration as the external water (i.e., a partition coefficient of 1). This internal water phase is of extremely minor importance for hydrophobic chemicals (i.e., chemicals with log Kow values greater than 2), and was ignored for this Step 3 evaluation. Since the addition of the F_{water} term would only serve to slightly increase the calculated uptake factor for hydrophilic chemicals and since hydrophilic COPECs are a minority of the COPECs selected for LHAAP, the omission of this term is expected to have an insignificant effect on modeled COPEC bioaccumulation. The water-to-worm partitioning coefficient described in Jager (1998) was used to replace the equivalent term in the USEPA (2003) equation, described above. Thus, the equation used to model uptake of constituents from soil to earthworms for organic constituents for the Step 3 evaluation was as follows:

$$BCF = \frac{F_{lipid} Kow}{Foc \times 10^{(0.983*\log Kow + 0.00028)}}$$ **Equation 7-17**

Site-specific data were used to calculate the organic carbon fraction (Foc) for LHAAP. The geometric mean of the soil Foc data (Foc = 0.0064) was used to calculate the Tier 1 BCFs, and the arithmetic mean (Foc = 0.011) was used to calculate the Tier 2 BCFs. COPEC-specific Kow values were obtained from an interactive web site sponsored by Syracuse Research Corporation <http://esc.syrres.com/interkow>. The syrres.com SMILES program is a program that estimates the log octanol/water partition coefficient of organic chemicals using an atom/fragment contribution method developed at Syracuse Research Corporation. It was selected as an easy-to-use, scientifically-based source of log Kow values. The log Kow values calculated by this program were compared to the TCEQ values in Figure 30 TAC §350.73(e) prior to their use as a variable for calculating uptake factors. With very few exceptions, the log Kow values from the two sources were identical. Soil-to-earthworm BCFs for COPECs in soil are presented in **Table 7-21**.

Small Mammals and Birds. Site-specific soil-to-mammal uptake factors were calculated using site-specific information for the Step 3 evaluation. A small mammal uptake study was conducted in January and February 2004 as a complementary effort to the rodent sperm analysis study being concurrently conducted by USACHPPM. Collocated soil and tissue samples were collected for small mammals, and uptake factors were calculated by dividing the tissue concentration by the soil concentration for each individual chemical. Details of the study are presented in **Appendix D**. The arithmetic mean of the uptake factors for all paired soil and tissue samples for a given chemical was used as the Tier 1 uptake factor, and the geometric mean was used as the Tier 2 uptake factor. These site-specific soil-to-mammal uptake factors were used in preference to literature values, as they represent the most accurate representation of soil to organism transfer of chemicals at LHAAP. Uptake factors for some chemicals could not be calculated using the site-specific data (e.g., if the COPEC was not detected in the soil or tissue samples collected during the field study). The average of the arithmetic (Tier 1) or geometric (Tier 2) means for inorganic or organic chemicals for which site-specific BCFs were calculated were used as surrogate values, in these instances.

Soil-to-mammal BCFs for COPECs in soil are presented in **Table 7-22**. In addition to the site-specific BCFs, soil-to-mammal BCFs from Sample et al. (1998) are also provided in this table for informational purposes. There is little information available in the literature regarding soil-to-bird uptake factors. Therefore, soil-to-mammal uptake factors were assumed to be the same for soil-to-birds. As the percentage of birds in the diet of higher-order consumers selected as measurement receptors was relatively low (e.g., 15 percent for the Red Fox, 5 percent for the River Otter, and 9 percent for the Red-Tailed Hawk), this assumption is expected to have a minor effect on the Step 3 results.

Aquatic Invertebrates. Concentrations of COPECs in aquatic invertebrates were estimated using sediment-to-aquatic invertebrate BCFs obtained from the literature. Bechtel Jacobs (1998) was used as the primary source of information for sediment-to-aquatic invertebrate BCFs. Empirically-based BCFs were also obtained from USEPA (1999a). Other sources (Oliver and Niimi, 1988; Standley, 1997) were used to obtain aquatic invertebrate BCFs for specific chemicals (i.e., DDD, DDT, and dieldrin). Inorganic chemicals for which BCFs could not be identified in the literature were assigned a surrogate BCF based on the geometric mean of the 90^{th} percentile and median values from available inorganic BCFs identified in Bechtel Jacobs (1998) for Tier 1 and Tier 2, respectively. Organic chemicals for which BCFs could not be identified in the literature were conservatively assigned a surrogate BCF equivalent to the 90^{th} percentile (Tier 1) and median (Tier 2) value for Aroclor 1254 from Bechtel Jacobs (1998).

The use of surrogates for chemically-related constituents is a common practice within USEPA programs including assignments of BCFs, e.g., the BCF for Aroclor 1254 is used as a surrogate for other Aroclor mixtures. Organic chemicals that are closely related (e.g., have similar structures and functional chains) often have similar toxicological properties, and are likely to exhibit similar degrees of interaction with, and retention in, biological tissues (i.e., bioaccumulation). Therefore, when an uptake factor was not available for a given chemical, a surrogate value was often used based on a similar compound. When no closely related compound with an uptake factor was identified, an upper-bound uptake factor based on all chemicals in the same general class (e.g., organics) was sometimes used as a surrogate value.

Sediment-to-aquatic invertebrate BCFs for COPEC in sediment are presented in **Table 7-23**.

Fish. COPEC concentrations in fish were calculated by multiplying the COPEC concentration in water by a COPEC-specific BCF obtained from the literature. It was assumed that the pathway for chemicals accumulated in the body burden of fish from sediment results from the partitioning of chemicals from sediment to water, which would be captured by the EPCs calculated from the surface water analytical data. Additional information regarding bioaccumulation from sediment to fish is provided in the aquatic direct toxicity evaluation (**Section 7.1.2**). The potential underestimation of COPEC concentrations in fish tissue by not explicitly including modeled sediment uptake is evaluated in **Section 8.0** by comparing the modeled fish COPEC concentrations, estimated using surface-water-to-fish BCFs, with:

- Sediment-to-brown-bullhead modeled fish tissue concentrations, from **Appendix B**; and
- Measured concentrations in fish tissue from USEPA Region 6 (2004).

Concentrations of COPECs in fish were estimated based on water-to-fish BCFs obtained from the literature. A variety of sources were used to obtain the water-to-fish BCFs, including IAEA (1994), Bintein and Devillers (1993), USEPA (1999a), USEPA (1989c), and ORNL's Risk Assessment Information System (RAIS) accessible at <http://risk.lsd.ornl.gov/cgi-

bin/tox/TOX_select?select=csf> (November 2004). Generally, the highest available value was used as the Tier 1 BCF, and the lowest value—or an average of the lower values, if at least three BCFs were available for a given chemical—was used as the Tier 2 BCF. For certain inorganic chemicals (e.g., perchlorate), no BCFs were available. In these cases, the geometric means of the Tier 1 and Tier 2 BCFs for all inorganic COPECs for which a BCF was available were used as surrogate Tier 1 and Tier 2 BCFs, respectively.

Water-to-fish BCFs for COPECs in surface water are presented in **Table 7-24**.

7.2.3.5 Area Use

The most important spatial consideration involved with estimating risks to wildlife receptors based on concentrations of chemicals in abiotic media is the ability of wildlife to move and potentially forage/hunt in areas outside of the affected property boundary. Animals travel varying distances on a daily to seasonal basis to find food, water, and shelter. The area encompassed by these travels is defined as the home range. A variety of factors may influence home range (i.e., habitat quality, food/prey abundance, and/or population density).

Adjustments in the risk calculations for receptors with home ranges different from the size of the site were accounted for in the exposure equations through the use of an AUF. The AUF is defined as the ratio of the area of the affected property to the home range (TNRCC, 2001; USEPA, 1997a). The AUF for soil is the fraction of the receptor's total soil exposure that occurs in the area of affected soil (TNRCC, 2001). Similarly, the AUF for water is the fraction of the receptor's total water exposure that occurs in the area of affected water (TNRCC, 2001). If the area being assessed is larger than the home range of a measurement receptor and provides the habitat requirements of the species, then an AUF of 1 is appropriate. However, if the measurement receptor has a home range that is larger than the site or if the site does not supply all of a species' habitat requirements, an AUF less than 1 would be appropriate.

Home range data for the selected receptor species are presented in **Table 7-17**. AUFs were calculated using the minimum home range for the Tier 1 food chain models and the average home range for the Tier 2 food chain models. The area of the particular terrestrial sub-area (i.e., Industrial, Low Impact, or Waste Sub-Area) was used to calculate the AUF for obligate terrestrial receptors (Deer Mouse, Short-Tailed Shrew, Red Fox, and American Woodcock). The sub-area area acreages were estimated as follows (see **Section 1.3.9** and **Figure 1-4**):

- Industrial Sub-Area = 2,330 acres
- Low-Impact Sub-Area = 3,217 acres
- Waste Sub-Area = 486 acres

The areas of the watersheds were established by calculating the area of habitat types known to be regularly inundated with water (i.e., cypress swamp and/or wetland/bottomland forest) abutting the four major creeks (see **Section 4.1.2** and **Figure 4-2**). These areas were assumed to represent the area that aquatic receptors (i.e., Muskrat, River Otter, Snapping Turtle, and Belted Kingfisher) might typically incorporate into their home range. The watershed areas were estimated as follows:

- Goose Prairie Creek = 246 acres
- Central Creek = 262 acres
- Harrison Bayou = 475 acres
- Saunders Branch = 150 acres

For receptors that have potentially significant components of exposure to both terrestrial and aquatic environments (Raccoon, Bank Swallow, and Red-Tailed Hawk), the larger of the terrestrial sub-area or the watershed area that were being evaluated was conservatively used for the calculation of the AUF. For example, 2,330 acres was used as the exposure area for the Raccoon evaluated for the Industrial Sub-Area (2,330 acres)/Goose Prairie Creek watershed (246 acres) food chain model.

Concerns whether surrounding habitat met receptor requirements when calculating AUFs are irrelevant for small-range receptors (Deer Mouse, Short-Tailed Shrew, Muskrat, Snapping Turtle, and American Woodcock) whose home ranges would fall entirely within a single sub-area or watershed boundary. For large-range receptors, specific habitat requirements may limit the area an organism utilizes as its home range. For example, a bird associated with forest interiors (e.g., Cerulean Warbler, *Dendroica cerulea*) may not be expected to utilize land occupied by a housing development abutting the woods where it breeds, even if the housing development falls within its home range area. However, none of the large-range measurement receptors selected in the Step 3 evaluation are considered habitat specialists that would be limited in their movements between or within the sub-areas and/or watersheds at LHAAP, which is covered by a mixture of woodlands and fields that is generally considered favorable habitat for all measurement receptors. Also, it is believed that the general lack of human presence across the installation would not significantly impede the movement of receptors between or among sub-areas and/or watersheds. Therefore, it is assumed that there are no impediments for the measurement receptors selected for this Step 3 evaluation to use habitat adjacent to their target sub-area and/or watershed, and any calculated AUF less than 1 is appropriate and applicable for estimating COPEC doses associated with exposure to site media from a particular sub-area/watershed complex.

The use of an AUF assumes that the adjacent habitat outside of the target area is uncontaminated. However, it is possible for organisms with home ranges larger than a sub-area/watershed complex to use adjacent habitats, which may fall into other areas of investigation at LHAAP and may also be contaminated. This issue is discussed in the Uncertainty Section (**Section 8.0**).

7.2.3.6 Bioavailability

Bioavailability is a measure of the potential for entry of the COPEC into ecological receptors and is specific to the receptor, the route of entry, time of exposure, and the environmental matrix containing the COPEC (Anderson et al., 1999). Bioavailability is the ratio of a COPEC that reaches a site of toxic action in an organism to the total load of the COPEC in the environment (TNRCC, 2001). Uptake and elimination rates of the bioavailable form are important since the combined effect of these factors determine whether the material is accumulated or eliminated. A COPEC may have different levels of bioavailability from soil, water, food, etc.

No site-specific data were available that would quantify the degree of bioavailability at LHAAP. Therefore, a default value of 100 percent bioavailability was used for all Step 3 calculations. In **Section 10.0**, however, bioavailability is addressed for some COPECs by evaluating the form of the COPEC (e.g., metallic lead vs. lead acetate).

7.2.3.7 Exposure Duration

Exposure duration accounts for migration or other seasonal activity patterns. Most species are expected to be present at LHAAP on a year round basis. However, receptor-specific activity patterns may modify exposure.

Although some species selected as measurement receptors may migrate seasonally (e.g., Bank Swallow), thus reducing their exposure to a COPEC at the installation, all selected measurement receptors have the potential to be year-round residents at LHAAP, or are used to represent other species that may not migrate. Therefore, no ED factors were identified that would be directly applicable to LHAAP, and an ED of 100 percent was used for all Step 3 calculations.

7.2.3.8 Physical/Chemical Properties of COPECs

Information on the physical/chemical properties of the COPECs was generally obtained from TCEQ guidance available at <http://www.tnrcc.state.tx.us/permitting/remed/techsupp/pcls010703> (November 2004). In addition, the physical/chemical properties of many COPECs are listed in Figure 30 TAC 350.73(e). The Hazardous Substances Data Bank (HSDB) available at <http://www.toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?HSDB> (November 2004) and the Syracuse Research Corporation database available at <http://esc.syrres.com/interkow> (November 2004) were also used to obtain log Kow values used in the food chain models.

7.2.4 Effects Characterization

The ecological effects characterization (toxicity assessment) includes a preliminary evaluation of the types of adverse effects on biota associated with exposure to COPECs, relationships between magnitude of exposures and adverse effects, and related uncertainties for chemical toxicity, particularly with respect to site biota. Ecological receptor health effects are characterized using USEPA-derived critical toxicity values, when available.

The Step 3 effects characterization fulfills two specific risk assessment objectives. First, available toxicological literature is reviewed to identify appropriate literature benchmark values to use. The toxicological literature forms the basis for developing summaries of the potential toxicity of the COPECs for inclusion in the risk assessment. Second, appropriate TRVs are developed using literature benchmark values and uncertainty factors (UFs) to estimate potential ecological risks associated with chemical exposures to measurement receptors.

In the screening ERAs, the TRVs were based strictly on the information provided in Sample et al. 1996. As a refinement, a literature review was conducted to identify additional published TRVs and toxicity data from which TRVs may be developed. A determination was then made regarding selection of the most appropriate TRV. When more than one TRV was available for a particular constituent, the rationale used to support the selection of the TRV is provided.

Because TRVs are species-specific, TRVs were required for each of the measurement receptors identified for LHAAP. TRVs were identified during the Step 1 and 2 screening ERAs for approximately 45 terrestrial COPECs and 30 aquatic COPECs. These values were reviewed during Step 3 and additional literature research was required for the remainder of the selected COPECs.

Several literature and on-line toxicological databases were searched for appropriate information from which to develop TRVs for the Common Snapping Turtle, including the Reptile and Amphibian Toxicological Literature database developed by the Canadian National Wildlife Research Centre, professional journals (e.g., Environmental Toxicology and Chemistry), and general Internet searches. Although some data exist for the calculation of total daily doses of chemicals, available data bases and literature do not provide appropriate and/or adequate TRVs for the assessment of exposure. Therefore, TRVs for amphibians and reptiles were not developed and used for Step 3. This uncertainty is discussed in **Section 8.0**.

7.2.4.1 Literature Review

The sources that were consulted for literature benchmark values varied with the type of organisms being used as ecological receptors (e.g., aquatic, terrestrial). Toxicologic information on chemicals in aquatic ecosystems is fairly plentiful, while data for terrestrial ecosystems are more limited. Most of the available toxicological information for soil-based exposures has been generated using soil-dependent biota. Sample and others (1996) have published toxicity benchmark values for many mammal and bird species, and were the primary source of TRVs used in the Step 3 evaluation. Other sources (e.g., USACHPPM, 2000; USEPA, 2004) were also used if values were not available in Sample and others (1996). To maintain a systematic and objective approach, the selection of TRVs was based on this hierarchy of sources rather than on a detailed chemical-by-chemical approach. The selection of final COPECs (**Section 10.0**) considers the effect of using alternate TRVs in the execution of the food chain models. When an alternative TRV is used, the rationale for its selection is provided.

7.2.4.2 Selection of Literature Benchmark Values

In selecting data to be used in the derivation of a TRV, the nature of the observed endpoints was the primary selection criterion. Literature benchmark values that best reflect potential impacts to wildlife populations through resultant changes in mortality and/or fecundity rates were preferentially used. Toxic responses such as elevated enzyme levels or increased tissue concentrations, while they may serve as biomarkers indicative of an organism's exposure, are not useful endpoints insofar as being relevant and indicative of adverse impacts to key receptor populations (TNRCC, 2001). Relevant intermediate (i.e., sub-chronic) and chronic endpoints are those that affect organism growth or viability, reproductive or developmental success, or any other endpoint that is, or is directly related to, parameters that influence population dynamics (TNRCC, 2001). The toxic effect manifested at the lowest exposure level was generally selected as the critical effect.

The following factors were considered when selecting literature benchmark values and developing TRVs for use in the risk assessment:

- Literature benchmark values were obtained from bioassays having test conditions as similar as possible to on-installation conditions.
- The literature benchmark values and TRVs corresponded with the exposure route being assessed. In ERAs, this is most typically the oral exposure route.
- The TRV was appropriate for the key receptor and toxicity endpoint being assessed.
- The literature benchmark value and TRVs corresponded to the appropriate ED period: subchronic (two weeks to one year) or chronic (greater than one year).
- The literature benchmark value and TRVs corresponded to the chemical form being assessed (only applicable to some chemicals, but especially metals such as chromium [trivalent or hexavalent], lead, and mercury).

For those chemicals that had no available TRV, surrogate chemicals were selected based on similarity in structural form, mode of toxicity, and/or conservative nature of available choices. Additionally, given that multiple TRVs were available for some chemicals (e.g., results for more than one test species or chemical form), professional judgment was used based on the receptor's functional feeding group (i.e., diet), position in the food chain, and/or conservatism of the TRV. Whenever professional judgment was used, additional information is provided to support the alternative TRV.

7.2.4.3 Selection of Endpoint Values

For each COPEC, the literature was reviewed for the exposure level shown to produce adverse effects in a potential receptor species. In all cases, NOAELs and LOAELs were identified as the endpoint values for chemicals, if available. Once identified, NOAEL and LOAEL values were used to derive a TRV. A NOAEL or LOAEL value was preferred over a lethal dose value for calculation of a TRV. For the Step 3 COPEC refinement, only NOAEL-based TRVs were used to estimate risk. In order to use benchmark values in the risk characterization, COPEC concentrations in soil, surface water, sediment, and prey (mg/kg or mg/L) were converted to dose values (mg/kg-body weight), so that dose was not under- or over-estimated when applied to organisms consuming different amounts of food per body weight. Average ingestion rates and body weights for the measurement receptors were obtained from various literature sources and are presented in **Table 7-17**. NOAEL-based TRVs used in the Step 3 food chain model are presented in **Table 7-25**. LOAEL-based TRVs are also presented in **Table 7-25**. These values may be used during later stages of the BERA (i.e., during the selection of ecological-based cleanup goals).

7.2.4.4 Extrapolation to Receptor Species

If a chronic NOAEL could not be located, a chronic NOAEL TRV was generated for a measurement receptor whenever possible using UFs. UFs were also applied to available toxicity data for some COPECs, as summarized below. In cases where there was insufficient toxicity data for the application of UFs, the use of TRVs for surrogate constituents were also considered.

Uncertainty Factors. One approach often used to derive an estimated NOAEL involves the use of UFs. Incomplete knowledge of the actual toxicity of a COPEC leads to the use of UFs to reduce the likelihood that risk estimates do not underestimate risk. Historically, UFs have been used for various extrapolations, and their applications reflect policy to provide conservative estimates of risk (Chapman et al. 1998). As discussed below, UFs are used in the risk assessment to reduce the probability of underestimating ecological risk from exposures to releases of COPECs. This is performed by multiplying a toxicity value by a UF to produce a TRV reflecting a NOAEL for a chronic ED.

UFs were used to convert a toxicity value to a chronic NOAEL-based TRV, as necessary. Specifically, UFs were used to account for extrapolation uncertainty due to differences in test endpoint:

- Test endpoint uncertainty - Extrapolation from a non-NOAEL endpoint (e.g., LOAEL, LD_{50}) to an NOAEL endpoint

The following UFs (Calabrese and Baldwin, 1993) were used to convert a toxicity test endpoint to a TRV that is equivalent to a chronic NOAEL:

- A chronic LOAEL was multiplied by a UF of 0.1 to convert it to a chronic NOAEL.
- A chronic NOAEL was multiplied by a UF of 3 to convert it to a chronic LOAEL. A UF of 10 was applied to chemicals that are generally considered non-toxic. The only chemicals for which a UF of 10, rather than 3, was used to convert a NOAEL to a LOAEL were trivalent chromium and manganese. LOAEL-based TRVs were not used in the Step 3 COPEC refinement.
- A subchronic NOAEL was multiplied by a UF of 0.1 to convert it to a chronic NOAEL.
- An acute NOAEL was multiplied by a UF of 0.5 to convert it to a chronic NOAEL.
- An acute lethal value (such as an LC_{50} or LD_{50}) was multiplied by a UF of 0.01 to convert it to a chronic NOAEL.

7.2.4.5 Special Case Chemicals

Some commonly detected chemicals require special considerations in the generation of a TRV (e.g., their potential to biomagnify, need for a surrogate component evaluation, and difficulty in obtaining toxicity information) or have specific chemical forms that greatly influence bioavailability and toxicity. The special case chemicals identified as COPECs through the Step 1 and 2 screenings and requested per USEPA Region 6 Comments (**Appendix K**) include:

- Chromium
- Lead
- Mercury
- Perchlorate
- Dioxin/furans and PCBs
- PAHs

Each of these classes of compounds is discussed briefly below, with TRVs presented in **Table 7-25**.

Chromium

Chromium is a naturally occurring metal that occurs in several valence states. Chromium (III) and chromium (VI) are the forms most commonly encountered in the environment. Additional site-specific information on chromium speciation is presented in BERA sections of this report

(**Volume II**). Chromium is used largely in the metallurgical, refractory and chemical industries (Agency for Toxic Substances and Disease Registry [ATSDR], 2000). The largest amount is used in the metallurgical industry in various steels and nonferrous alloys. The second largest use is by the chemical industry in such products as pigments, metal finishing, leather tanning and wood treatment.

Chromium is released into the atmosphere from natural gas, oil and coal combustion, and from use by industries mentioned above (ATSDR, 2000). Other sources include wind transport from road dust, cement producing plants, the wearing down of asbestos brake linings from automobiles, incineration of municipal refuse and sewage sludge, exhaust emission from automotive catalytic converters, and emissions from cooling towers that use chromium compounds as rust inhibitors. Chromium from these sources exists in a particulate form that may travel great distances from the point of emissions; wet and dry deposition account for the majority of removal from air. Most chromium released to surface water eventually adsorbs to particles and becomes deposited in bottom sediment, but small quantities may remain in the water in both soluble and insoluble forms. Chromium in soil is present mainly as insoluble oxides that are unlikely to be mobile to any significant extent. Soluble forms may also be present, depending on the form of the chemical released, which may be quite mobile in soil.

Lead

Lead is a naturally occurring metal used in the manufacture of batteries, ammunition, and other metal products (ATSDR, 1999b). Lead may enter the environment during mining, ore processing, smelting, refining, use, recycling or disposal (ATSDR, 1999b; HSDB, 2002). Emission from automobile exhaust was at one time the largest source of atmospheric lead. Natural sources are minor compared with anthropogenic sources. Generally the form of lead that enters the atmosphere is not known. However, metallic lead may be released from smelting and refining plants. Lead in air exists attached to small particles that may travel great distances before removal by wet or dry deposition. Lead deposited on or released to soil generally remains in the top 2 to 5 cm where it remains relatively immobile, although a small percentage may be present in soluble forms that are subject to leaching. Acid conditions increase the potential for leaching. Lead released to surface water tends to form salts that are only sparingly soluble. Deposition in bed sediment is the primary removal mechanism, although biomethylation may mobilize lead and return it to the water column. Soil and sediment act as sinks for anthropogenic releases of lead.

Mercury

Mercury typically occurs in the environment in two forms: inorganic compounds of mercury, which exist as readily dissociated salts, and methylmercury, which forms naturally in water from the bioconversion of inorganic forms of mercury. Although most mercury in aquatic systems consists of inorganic mercury, a variable but substantial amount of mercury in water may undergo bioconversion to methylmercury, which partitions to suspended sediment or volatilizes to air (ATSDR, 1999a). The extent of bioconversion is highly variable, depending in part on pH, levels of organic matter in the water, and ambient temperature. It was assumed that all mercury detected in soil is in the inorganic form (TRVs for inorganic mercury were used) and all mercury in surface water and sediment is in the organic form (TRVs for methylmercury were used). This assumption is considered conservative because USEPA (1998b) assumes that 85 percent of mercury in surface water exists as inorganic mercury and 15 percent exists as methylmercury.

Perchlorate

Perchlorate is an oxidizing anion that originates as a contaminant in ground and surface waters from the dissolution of ammonium, potassium, magnesium, or sodium salts. Perchlorate is exceedingly mobile in aqueous systems and can persist for many decades under typical ground and surface water conditions (USEPA, 2002b). Ammonium perchlorate is manufactured for use as an oxidizer component and is a primary ingredient in solid propellant for rockets, missiles and fireworks and has been detected at LHAAP in soil, groundwater and surface water.

As an oxidant, perchlorate is kinetically nonlabile. This means that the reduction of the central chlorine atom from an oxidation state of +7 (perchlorate) to –1 (chloride ion) occurs extremely slowly. Sorption is not expected to attenuate perchlorate because it absorbs weakly to most soil minerals. Natural chemical reduction in the environment is not expected to be significant. These two factors account for perchlorate being very mobile in aqueous systems and persistent for many decades (USEPA, 2002b). The activation energy required for perchlorate reduction is so high that it cannot be expected to act as an oxidant under biological conditions (i.e., dilute solution, non-elevated temperatures, and neutral pH). This is supported by pharmacokinetic evidence (i.e., studies on absorption, distribution, metabolism, and elimination) that shows perchlorate is excreted virtually unchanged after absorption (USEPA, 2002b).

No federal regulatory standards (i.e., discharge standards or MCLs under the Clean Water Act, Safe Drinking Water Act, CERCLA or Resource Conservation and Recovery Act) are available for perchlorate and only an interim action level of 4 µg/L for drinking water is available for the State of Texas. An *Assessment Guidance for Perchlorate* was issued by USEPA in 2006 and presents a human health reference dose of 0.0007 mg/kg-day (USEPA, 2006). The U.S. Department of Defense does not currently endorse an ecological TRV for perchlorate due to the lack of clear regulatory guidance (USDOD, Perchlorate Work Group; USDOD, 2006). However, sufficient information is available in the literature to develop TRVs and estimate hazard associated with exposure to perchlorate by ecological receptors. Therefore, hazard estimates for this chemical will be assessed, but no further action relating to potential ecological risk from perchlorate (e.g., development of cleanup goals, etc.) is currently planned.

Dioxins/Furans

As discussed previously (**Section 6.1.2.3**), dioxins were evaluated using the TCDD-TEQ approach. All dioxin congeners in a given sample were multiplied by a TEF and summed. The resulting TCDD-TEQ value was then evaluated using the TRVs associated with 2,3,7,8-TCDD.

PAHs

PAHs are multiple ring structures made of carbon and hydrogen. They are formed from natural and anthropogenic processes and are considered to be ubiquitous in the environment. Generally, the characteristics of the individual PAH will determine fate in the environment and toxicity to wildlife. Individual PAHs are considered to exert their effect(s) through the same mechanism of toxicity; thus, HQs for PAHs would have been summed for high and low molecular weight categories as recommended by TCEQ (TNRCC, 2001). However, no PAHs were identified as COPECs in media at LHAAP (**Tables 6-17** through **6-28**). Therefore, no separation of high and low molecular weight PAH categories was necessary.

7.2.5 Results of the Food Chain Model

In Step 3, the evaluation of ecological impacts can be either qualitative or quantitative, depending on the data available, DQOs, and the stated level of effort. Typically, the evaluation is performed through a series of quantitative HQ calculations that compare exposure values with TRVs. The TRVs, as derived from literature benchmark values, serve in this case as surrogate measurement endpoints. Simple ratios of exposure values to TRVs are reported as EEQs. EEQs are also known as HQs. EEQs are summed across exposure pathways (where appropriate) for a given receptor for individual chemicals, and also summed for those chemicals that have the same mechanism of toxicity. EEQs were developed for individual chemicals, as well as for constituents that have the same mechanism of toxicity. (The HIs in the Step 1 and 2 ERAs were developed considering additivity of all constituents regardless of the mechanism of toxicity.) Chemicals whose EEQs were summed due to similar toxic effects include the following:

- Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT)
- Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane)
- DDX pesticides (4,4'-DDD, 4,4’-DDE, 4,4’-DDT)
- Non dioxin-like PCBs (i.e., Aroclors) (Aroclors 1242, 1248, 1254, 1260, 1268)
- Phthalate esters (bis-2ethylhexyl and butylbenzyl)
- OC cyclodiene insecticides (aldrin, dieldrin, endrin)

In risk characterization, the chemical intakes calculated in the exposure characterization are combined with the appropriate toxicity values identified in the effects characterization (**Section 7.2.4**). The results are the estimated ecological hazards posed by potential COPEC exposures. This ratio of the exposure value (i.e., dose) to the effects value (i.e., TRV) is the result of the risk calculation.

The initial terrestrial and aquatic COPEC screen (**Section 6.3**) resulted in a total of 56 preliminary COPECs that were carried forward to the food chain models, including sixteen inorganic chemicals, five VOCs, four SVOCs, dioxin (2,3,7,8-TCDD TEQ), 15 pesticides, five PCBs, five nitroaromatic compounds, perchlorate, and four general chemistry parameters (**Table 6-28**). These chemicals that were not eliminated in the abiotic screening process were evaluated in the food chain models to determine if concentrations of chemicals in abiotic media and prey items had the potential to adversely impact populations.

In the food chain models, the concentrations of chemicals in abiotic media were modeled as they accumulate in prey items (e.g., plant and earthworm tissues) and are subsequently ingested by predators. The uptake factors described in **Section 7.2.3.4** were used to estimate the magnification of concentrations through the food chain.

Using the uptake factors, the total concentration that accumulates in prey items consumed by measurement receptor was then converted to a COPEC dose using receptor-specific diet composition, body weight, and other information an input to the dose equations presented in **Section 7.2.2**. The dose to the measurement receptor was then compared to NOAEL-based TRVs. NOAEL-based TRVs represent doses at which no impact is expected, while LOAEL-based TRVs represent dose threshold levels at which adverse effects are likely to occur. Although LOAEL-based EEQs were calculated, only NOAEL-based EEQs are presented in the Step 3 COPEC refinement. As TRVs are rarely available for the same receptor species that are used in the food chain model, TRVs that were available for more than one test organism (e.g., a rat and a mink), had the most appropriate TRV selected for the given measurement receptor (e.g., the mink TRV was used for the River Otter measurement receptor). EEQs were calculated by dividing the estimated exposure dose by the NOAEL TRV. EEQs greater than 1 indicate that the TRV was exceeded, and there is the potential for adverse effects to the measurement receptor.

The measurement receptors used in the food chain models were selected to represent the various niches in the ecosystem at LHAAP. Twelve receptors were modeled for food chain effects, including the Mammalian Herbivore (Deer Mouse), Mammalian Omnivore (Raccoon), Mammalian Insectivore (Short-Tailed Shrew and Townsend's Big-Eared Bat), Mammalian Carnivore (Red Fox), Aquatic Mammalian Herbivore (Muskrat), Aquatic Mammalian Carnivore (River Otter), Aquatic Reptilian Omnivore (Snapping Turtle), Aquatic Avian Insectivore (Bank

Swallow), Terrestrial Avian Insectivore (American Woodcock), Avian Piscivore (Belted Kingfisher), and Avian Carnivore (Red-Tailed Hawk). A modified raccoon receptor was run to represent a large, bear-like mammalian omnivore. Because TRVs were not available for reptiles (see **Section 7.2.4**), Snapping Turtle EEQs were not evaluated in the models. As noted previously, four additional measurement receptors (terrestrial plants, terrestrial invertebrates the Fathead Minnow, and Brown Bullhead Catfish,), were evaluated separately as part of the terrestrial or aquatic direct toxicity evaluations (**Sections 7.1.1** and **7.1.2**), and were not included in the food chain models discussed in **Section 7.2.2**.

As previously described, all measurement receptors were evaluated using Tier 1 and Tier 2 approaches. The Tier 1 approach was the primary source of information from the food chain models that was used to make decisions regarding whether an individual chemical represents a potential threat, and should be carried forward into the BERA. The Tier 1 approach presented a more conservative estimate of hazard for each receptor by using the following assumptions:

- The 95 percent UCL concentration of the chemical in the media was used as the EPC
- Upper bound (e.g., 90th percentile) uptake factors for transfer of COPECs through the food chain were used
- Minimum home ranges were used for calculating AUFs, when applicable

The Tier 2 approach was conducted for informational purposes. The results of the Tier 2 iteration were generally not used for determining whether an individual chemical represents a potential threat and should be carried forward into the BERA. The Tier 2 approach presents a less conservative (and potentially more realistic) estimate of hazard for each receptor by using the following assumptions:

- The mean concentration of the chemical in the media was used as the EPC
- Average uptake factors for transfer of COPECs through the food chain were used
- Average home ranges were used for calculating AUFs, when applicable

Average food intake rates and body weights were used for both Tier 1 and Tier 2.

The food chain model was run for all receptors for each of the three terrestrial sub-areas, and for each of the four watersheds. Because the terrestrial receptors also utilize watershed resources (e.g., ingestion of drinking water from a particular water source), a unique model was run for each sub-area/watershed combination that occurs at LHAAP. The watersheds intersect with the three sub-areas, as follows:

- The Industrial Sub-Area is traversed by Goose Prairie Creek and Central Creek
- The Low Impact Sub-Area is traversed by Goose Prairie Creek, Central Creek, Harrison Bayou, and Saunders Branch
- The Waste Sub-Area is traversed by Central Creek and Harrison Bayou

Thus, eight separate food chain models were performed. The results of these models are summarized in **Tables 7-26** through **7-33**. These summary tables present the NOAEL-based EEQs for the Tier 1 and 2 food chain model iterations for each receptor. EEQs greater than 1 are bolded. The complete food chain model spreadsheets are presented in **Appendix E**. The following discussion summarizes the results by sub-area and watershed.

*Industrial Sub-Area (Terrestrial) (**Tables 7-26** and **7-27**)*

All primarily terrestrial receptors (Deer Mouse, Short-Tailed Shrew, Red Fox, American Woodcock, and Red-Tailed Hawk) had at least one chemical with an EEQ greater than 1. The Townsend's Big-Eared Bat and the Red-Tailed Hawk only had a single EEQ that was marginally greater than 1 in the Industrial Area/Central Creek watershed (**Table 7-27**). Chemicals that had an EEQ greater than 1 for the terrestrial receptors were as follows:

- 2,3,7,8-TCDD TEQ
- Aluminum
- Antimony
- Aroclor 1254
- Cadmium
- Chromium
- DDD
- DDT
- Lead
- Vanadium
- Zinc

The summed Aroclors and DDX chemical groups also had EEQs that exceeded 1 for at least one receptor.

Exposure to aluminum resulted in the highest EEQ for all receptors except the American Woodcock (chromium) and the Red-Tailed Hawk, (2,3,7,8-TCDD TEQ).

*Low Impact Sub-Area (Terrestrial) (**Tables 7-28** through **7-31**)*

All primarily terrestrial receptors (Deer Mouse, Short-Tailed Shrew, Red Fox, American Woodcock, and Red-Tailed Hawk) except the Red Fox had at least one chemical with an EEQ greater than 1. The Red-Tailed Hawk only had a single EEQ that was marginally greater than 1 in the Low Impact Sub-Area/Central Creek watershed (**Table 7-29**), and the Townsend's Big-Eared Bat had a single EEQ that was marginally greater than 1 in the Low Impact Sub-Area/Harrison Bayou watershed (**Table 7-30**). Chemicals that had an EEQ greater than 1 for the terrestrial receptors were as follows:

- 2,3,7,8-TCDD TEQ
- Aluminum (however, all aluminum exceedances were the result of exposure to aquatic media in the Harrison Bayou watershed)
- Cadmium
- Chromium
- DDT
- Lead
- Pentachlorophenol
- Vanadium
- Zinc

The summed DDX chemical group also had EEQs that exceeded 1 for at least one receptor.

Exposure to 2,3,7,8-TCDD TEQ resulted in the highest EEQ for all receptors except the American Woodcock (chromium).

*Waste Sub-Area (Terrestrial) (**Tables 7-32** and **7-33**)*

All primarily terrestrial receptors (Deer Mouse, Short-Tailed Shrew, Red Fox, Townsend's Big-Eared Bat, American Woodcock, and Red-Tailed Hawk) had at least one chemical with an EEQ greater than 1. Chemicals that had an EEQ greater than 1 for the terrestrial receptors were as follows:

- 1,3,5-TNB
- 1,3-DNB
- 2,3,7,8-TCDD TEQ
- 2,4,6-TNT
- 2,4-DNT
- Aluminum
- Antimony
- Barium
- Cadmium
- Chromium
- HCB
- HMX
- Lead

- Vanadium
- Zinc

The summed nitrotoluenes chemical group also had EEQs that exceeded 1 for all receptors.

Exposure to nitrotoluenes (particularly 2,4,6-TNT) was an important risk driver in soil in the Waste Sub-Area, and resulted in the highest EEQ for all receptors.

*Goose Prairie Creek (Aquatic) (**Tables 7-26** and **7-28**)*

All primarily aquatic receptors (Raccoon, Muskrat, River Otter, Bank Swallow, and Belted Kingfisher) had at least one chemical with an EEQ greater than 1. Chemicals that had an EEQ greater than 1 for the aquatic receptors were as follows (it should be noted that some chemicals may be associated with the soil exposure portion of the receptor's food chain model, e.g., the hazard associated with 2,3,7,8-TCDD TEQ for the raccoon is primarily associated with its soil exposure):

- 2,3,7,8-TCDD TEQ
- Aluminum
- Barium
- BEHP
- Lead
- Mercury
- Thallium
- Vanadium
- Zinc

The summed phthalate chemical group also had an EEQ that exceeded 1 for at least one receptor.

Exposure to aluminum resulted in the highest EEQ for most receptors, although exposure to thallium was most significant for the River Otter, and 2,3,7,8-TCDD TEQ was most significant for the Belted Kingfisher.

*Central Creek (Aquatic) (**Tables 7-27**, **7-29**, and **7-32**)*

All primarily aquatic receptors (Raccoon, Muskrat, River Otter, Bank Swallow, and Belted Kingfisher) had at least one chemical with an EEQ greater than 1. Chemicals that had an EEQ greater than 1 for the aquatic receptors were as follows:

- 1,3,5-TNB
- 1,3-DNB
- 2,3,7,8-TCDD TEQ

- 2,4,6-TNT
- 2,4-DNT
- Aluminum
- Barium
- Mercury
- Thallium
- Vanadium

The summed nitrotoluenes chemical group also had EEQs that exceeded 1 for at least one receptor.

It should be noted that some chemicals may be associated with the soil exposure portion of the receptor's food chain model; e.g., the hazards associated with the nitroaromatics and 2,3,7,8-TCDD for the raccoon are primarily associated with its soil exposure. For chemicals associated primarily with the watershed (rather than soil), exposure to aluminum resulted in the highest EEQ for most receptors, although exposure to 2,3,7,8-TCDD TEQ was most significant for the River Otter and Belted Kingfisher.

*Harrison Bayou (Aquatic) (**Tables 7-30** and **7-33**)*

All primarily aquatic receptors (Raccoon, Muskrat, River Otter, Bank Swallow, and Belted Kingfisher) had at least one chemical with an EEQ greater than 1. Chemicals that had an EEQ greater than 1 for the aquatic receptors were as follows:

- 1,3,5-TNB
- 1,3-DNB
- 2,3,7,8-TCDD TEQ
- 2,4,6-TNT
- 2,4-DNT
- Aluminum
- Barium
- Chromium
- Mercury
- Nitrate/Nitrite
- Thallium
- Vanadium

The summed nitrotoluenes chemical group also had EEQs that exceeded 1 for at least one receptor.

It should be noted that some chemicals may be associated with the soil exposure portion of the receptor's food chain model; e.g., the hazards associated with the nitroaromatics and 2,3,7,8-

TCDD for the raccoon are primarily associated with its soil exposure. For chemicals associated primarily with the watershed (rather than soil), exposure to aluminum resulted in the highest EEQ for most receptors, although exposure to thallium was most significant for the River Otter, and 2,3,7,8-TCDD TEQ was most significant for the Belted Kingfisher.

*Saunders Branch (Aquatic) (**Table 7-31**)*

All primarily aquatic receptors (Raccoon, Muskrat, River Otter, Bank Swallow, and Belted Kingfisher) had at least one chemical with an EEQ greater than 1. Chemicals that had an EEQ greater than 1 for the aquatic receptors were as follows (it should be noted that some chemicals may be associated with the soil exposure portion of the receptor's food chain model, e.g., the hazard associated with 2,3,7,8-TCDD TEQ for the raccoon is primarily associated with its soil exposure):

- 2,3,7,8-TCDD TEQ
- Aluminum
- Barium
- Mercury
- Vanadium
- Zinc

Exposure to aluminum resulted in the highest EEQ for all receptors.

7.3 Comparison of Risk Drivers to Background

COPEC detected in various media were compared to concentrations in background samples (Shaw, 2004a, 2004b, and **Appendix F-1**). Because of the complexity of the on-site data (i.e., the use of multiple data sets collected for multiple purposes) and the inherent strengths and weaknesses of any statistical or non-statistical comparison to background, multiple tools were used to determine whether on-site concentrations were naturally occurring or present as a result of anthropogenic activities. These tools included the following statistical and non-statistical approaches:

- ***Wilcoxon Rank Sum (WRS) Test.*** A WRS test is a non-parametric test that is used to determine whether two data sets (i.e., on-site and background) are from the same population. Because of the non-parametric nature of this test, it is insensitive to infrequent, but elevated concentrations.

- ***"Bright Line" Test.*** A bright line test is essentially the comparison of the upper tails of two data sets. The MDC of the on-site data set is compared with a concentration representing the upper limit of background concentrations. If the MDC exceeds the selected concentration, contamination may be present. For this Step 3 evaluation, both the upper tolerance limit (UTL) and upper prediction limit (UPL) were used as the representative background concentrations, and the lower of the two was conservatively used for initial conclusions.

- ***Geochemical Evaluation.*** A geochemical evaluation examines the naturally occurring relationships of trace elements with specific minerals, or reference elements. In simplified terms, concentrations of metals present in site media that are present due to natural background conditions exhibit a linear relationship with their reference element(s), while chemicals present as the result of contamination deviate from this linear pattern. Because it is not the magnitude of the concentration detected but the ratio of the trace element to the reference element that is important, the geochemical evaluation was considered a useful tool for the LHAAP background analysis.

- ***Box-and-Whisker Plots.*** Box and Whisker plots are used to provide a visual comparison of the range and central values (e.g., medians) of on-site versus background data sets.

- ***Texas Background Values.*** Comparisons were also made to median background values for the state of Texas (TCEQ, 2001; TAC 350.51(1) and 350.71(k)).

These approaches and results of the background comparison are described in more detail in **Appendix F** and **Appendix F-1**. The conclusions of the background comparison are used in the chemical-by-chemical determination of final COPEC (**Section 10.0**). Preliminary COPECs determined to be background-related are not eliminated entirely from the 8-Step process. Rather, they are retained in a list and presented again during Risk Characterization (Step 7) for consideration by risk managers. However, because they are considered naturally occurring and/or environmentally ubiquitous, they are not included as final COPECs, and are not candidates for additional ecological characterization or investigation in the BERA.

Table 7-1
Direct Contact Toxicity Evaluation for Earthworms, Total Soil Industrial Sub-Area

Table 7-2
Direct Contact Toxicity Evaluation for Plants, Total Soil, Industrial Sub-Area

Table 7-3
Direct Contact Toxicity Evaluation for Earthworms, Total Soil, Low Impact Sub-Area

Table 7-4
Direct Contact Toxicity Evaluation for Plants, Total Soil, Low Impact Sub-Area

Table 7-5
Direct Contact Toxicity Evaluation for Earthworms, Total Soil, Waste Sub-Area

Table 7-6
Direct Contact Toxicity Evaluation for Plants, Total Soil, Waste Sub-Area

Table 7-7
Surface Water Direct Contact Assessment for Aquatic Life, Harrison Bayou

Table 7-8
Sediment Direct Contact Assessment for Aquatic Life, Harrison Bayou

Table 7-9
Surface Water Direct Contact Assessment for Aquatic Life, Goose Prairie Creek

Table 7-10
Sediment Direct Contact Assessment for Aquatic Life, Goose Prairie Creek

Table 7-11
Surface Water Direct Contact Assessment for Aquatic Life, Central Creek

Table 7-12
Sediment Direct Contact Assessment for Aquatic Life, Central Creek

Table 7-13
Surface Water Direct Contact Assessment for Aquatic Life, Saunders Branch

Table 7-14
Sediment Direct Contact Assessment for Aquatic Life, Saunders Branch

Table 7-15
Summary of Aquatic Assessment - Direct Contact with Surface Water and Sediment COPECs and Hazard Quotients for Estimated Critical Body Residues for Fish

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Summary of Surface Water and Sediment COPECs - For Direct Contact and Fish Body Residue Exposure Pathways

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Receptor- Specific Exposure Assumptions for Selected Measurement Receptors

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Exposure Point Concentrations for Preliminary COPECs

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Recommended Bioaccumulation/Bioconcentration Factors or Regression Equations Utilized for the Soil-to-Plant Pathway

Table 7-21
Recommended Bioaccumulation/Bioconcentration Factors or Regression Equations Utilized for the Soil-to-Earthworm Pathway

Table 7-22
Recommended Bioaccumulation/Bioconcentration Factors Utilized for the Soil-to-Small Mammal and Bird Pathways

Table 7-23
Recommended Bioaccumulation/Bioconcentration Factors Utilized for the Sediment-to-Aquatic Invertebrate Pathway

Table 7-24
Recommended Bioaccumulation/Bioconcentration Factors Utilized for the Water-to-Fish Pathway

Table 7-25
NOAEL-Based and LOAEL-Based Toxicity Reference Values for Mammals and Birds

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Wildlife NOAEL-Based EEQs for All Food Chain Receptors, Industrial Sub-Area/Goose Prairie Creek Watershed

Table 7-27
Wildlife NOAEL-Based EEQs for All Food Chain Receptors, Industrial Sub-Area/Central Creek Watershed

Table 7-28
Wildlife NOAEL-Based EEQs for All Food Chain Receptors, Low Impact Sub-Area/Goose Prairie Creek Watershed

Table 7-29
Wildlife NOAEL-Based EEQs for All Food Chain Receptors, Low Impact Sub-Area/Central Creek Watershed

Table 7-30
Wildlife NOAEL-Based EEQs for All Food Chain Receptors, Low Impact Sub-Area/Harrison Bayou Watershed

Table 7-31
Wildlife NOAEL-Based EEQs for All Food Chain Receptors, Low Impact Sub-Area/Saunders Branch Watershed

Table 7-32
Wildlife NOAEL-Based EEQs for All Food Chain Receptors, Waste Sub-Area/Central Creek Watershed

Table 7-33
Wildlife NOAEL-Based EEQs for All Food Chain Receptors, Waste Sub-Area/Harrison Bayou Watershed

Table 7-1
Direct Contact Toxicity Evaluation for Earthworms
Total Soil
Industrial Sub-Area

Chemical [a]	Detection Frequency	95 % UCL (mg/kg)	Mean (mg/kg)	ORNL Screening Toxicity Value [b] (mg/kg)	LANL/Eco-SSL Screening Toxicity Value [c] (mg/kg)	Comment on Screening Value	Relevant Screening Value (mg/kg)	Tier 1 EEQ [d]	Tier 2 EEQ [e]
Aluminum	522/540	9.54E+03	8.99E+03	NVA	NVA	---	NVA	---	---
Antimony	60/570	2.10E+00	2.05E+00	NVA	78	---	78	0.03	0.03
Cadmium	134/654	8.87E-01	7.47E-01	20	---	---	20	0.04	0.04
Chromium	630/655	1.88E+01	1.76E+01	32	---	Cr III	32	0.59	0.55
Chromium	630/655	1.88E+01	1.76E+01	0.4	---	Cr VI	0.4	47	44
Copper	496/543	1.76E+01	1.33E+01	50	---	---	50	0.35	0.27
Iron	521/540	1.74E+04	1.64E+04	NVA	NVA	---	NVA	---	
Lead	645/653	4.75E+01	3.99E+01	500	---	---	500	0.10	0.08
Mercury (Inorganic)	144/654	5.89E-01	2.65E-01	0.1	---	For organic and inorganic forms	0.1	5.89	2.65
Nickel	310/337	1.07E+01	9.95E+00	200	---	---	200	0.05	0.05
Selenium	244/654	1.50E+00	1.17E+00	70	---	---	70	0.02	0.02
Strontium	450/532	5.39E+01	3.84E+01	NVA	NVA	---	NVA	---	---
Vanadium	205/205	2.60E+01	2.48E+01	NVA	NVA	---	NVA	---	---
Zinc	539/543	6.16E+01	5.34E+01	200	---	---	200	0.31	0.27
Nitrate	38/93	1.86E+00	1.21E+00	NVA	NVA	---	NVA	---	---
Sulfate	75/161	1.35E+02	9.41E+01	NVA	NVA	---	NVA	---	---
2,3,7,8-TCDD TEQ	89/90	7.62E-06	5.82E-06	NVA	5	2,3,7,8-TCDD	5	1.52E-06	1.16E-06
Aroclor 1242	20/149	7.73E-03	6.31E-03	NVA	NVA	---	NVA	---	---
Aroclor 1248	7/149	1.55E-03	1.11E-03	NVA	NVA	---	NVA	---	---
Aroclor 1254	30/149	5.39E-02	3.78E-02	NVA	NVA	---	NVA	---	---
Aroclor 1260	29/149	1.87E-02	1.70E-02	NVA	NVA	---	NVA	---	---
4,4'-DDD	11/170	1.88E-03	1.64E-03	NVA	NVA	---	NVA	---	---
4,4'-DDE	59/170	1.72E-02	1.20E-02	NVA	NVA	---	NVA	---	---
4,4'-DDT	37/170	6.89E-03	5.57E-03	NVA	NVA	---	NVA	---	---
Aldrin	8/170	2.82E-03	1.76E-03	NVA	NVA	---	NVA	---	---
alpha-Chlordane	16/71	2.60E-03	1.34E-03	NVA	NVA	---	NVA	---	---
Chlordane	1/161	2.39E-04	1.60E-04	NVA	NVA	---	NVA	---	---
cis-Nonachlor	5/52	3.91E-04	2.70E-04	NVA	NVA	---	NVA	---	---
Dieldrin	3/170	1.70E-03	1.51E-03	NVA	NVA	---	NVA	---	---
Endrin	9/170	4.06E-04	2.95E-04	NVA	NVA	---	NVA	---	---
gamma-Chlordane	1/19	5.38E-03	3.61E-03	NVA	NVA	---	NVA	---	---
Heptachlor	1/170	2.07E-04	1.65E-04	NVA	NVA	---	NVA	---	---
Hexachlorobenzene	2/545	1.08E-01	1.48E-02	NVA	NVA	---	NVA	---	---
Pentachloro-anisole	14/52	8.77E-04	5.07E-04	NVA	NVA	---	NVA	---	---
Perchlorate	83/278	3.79E+00	2.93E+00	NVA	NVA	---	NVA	---	---
trans-Nonachlor	6/52	4.15E-04	2.72E-04	NVA	NVA	---	NVA	---	---

Notes:

[a] Constituents of potential ecological concern (COPECs) based on results of screening assessment

[b] Screening toxicity values for earthworms from Efroymson, R.A., Will, M.E., and Suter II, G.W., 1997c, *Toxicological Benchmarks for Contaminants of Potential Concern for Effects on Soil and Litter Invertebrates and Heterotrophic Processes: 1997 Revision*, Lockheed Martin Energy Systems, Inc. ES/ER/TM-126/R2

[c] Lower of the available screening values from LANL (Los Alamos National Laboratory), 2005, Environmental Restoration (ER) Project Ecorisk Database (Release 2.2), September, and USEPA (United States Environmental Protection Agency), 2005, Guidance for Developing Ecological Soil Screening Levels (Eco-SSL), Office of Solid Waste and Emergency Response, Website version last updated March 15, 2005: http://www.epa.gov/ecotox/ecossl (Eco-SSL for Soil Invertebrates).

[d] Tier 1 EEQ is estimated by dividing the concentration equal to the 95 % UCL of the mean by the relevant direct contact screening value.

[e] Tier 2 EEQ is estimated by dividing the arithmetic average concentration by the relevant direct contact screening value.

Cr III trivalent chromium
Cr VI hexavalent chromium
EEQ ecological effects quotient
LANL Los Alamos National Laboratory
mg/kg milligrams per kilogram
NVA no value available
ORNL Oak Ridge National Laboratory
TCDD tetrachlorodibenzodioxin
TEQ toxicity equivalency quotient
UCL upper confidence limit

Table 7-2
Direct Contact Toxicity Evaluation for Plants
Total Soil
Industrial Sub-Area

Chemical [a]	Detection Frequency	95 % UCL (mg/kg)	Mean (mg/kg)	ORNL Screening Toxicity Value [b] (mg/kg)	LANL/Eco-SSL Screening Toxicity Value [c] (mg/kg)	Comment on Screening Value	Relevant Screening Value (mg/kg)	Tier 1 EEQ [d]	Tier 2 EEQ [e]
Aluminum	522/540	9.54E+03	8.99E+03	50	---	---	50	191	180
Antimony	60/570	2.10E+00	2.05E+00	5	---	---	5	0.42	0.41
Cadmium	134/654	8.87E-01	7.47E-01	4	---	---	4	0.2	0.2
Chromium	630/655	1.88E+01	1.76E+01	1	---	Cr III	1	19	18
Chromium	630/655	1.88E+01	1.76E+01	NVA	0.35	Cr VI	0.35	54	50
Copper	496/543	1.76E+01	1.33E+01	100	---	---	100	0.18	0.13
Iron	521/540	1.74E+04	1.64E+04	NVA	NVA	---	NVA	---	---
Lead	645/653	4.75E+01	3.99E+01	50	---	---	50	0.95	0.80
Mercury (Inorganic)	144/654	5.89E-01	2.65E-01	0.3	---	---	0.3	1.96	0.88
Nickel	310/337	1.07E+01	9.95E+00	30	---	---	30	0.4	0.3
Selenium	244/654	1.50E+00	1.17E+00	1	---	---	1	1.5	1.2
Strontium	450/532	5.39E+01	3.84E+01	NVA	NVA	---	NVA	---	---
Vanadium	205/205	2.60E+01	2.48E+01	2	---	---	2	13	12
Zinc	539/543	6.16E+01	5.34E+01	50	---	---	50	1.23	1.07
Nitrate	38/93	1.86E+00	1.21E+00	NVA	NVA	---	NVA	---	---
Sulfate	75/161	1.35E+02	9.41E+01	NVA	NVA	---	NVA	---	---
2,3,7,8-TCDD TEQ	89/90	7.62E-06	5.82E-06	NVA	NVA	---	NVA	---	---
Aroclor 1242	20/149	7.73E-03	6.31E-03	40	---	---	40	1.93E-04	4.43E-04
Aroclor 1248	7/149	1.55E-03	1.11E-03	40	---	---	40	3.88E-05	4.33E-04
Aroclor 1254	30/149	5.39E-02	3.78E-02	40	---	---	40	1.35E-03	9.45E-04
Aroclor 1260	29/149	1.87E-02	1.70E-02	40	---	---	40	4.68E-04	4.85E-04
4,4'-DDD	11/170	1.88E-03	1.64E-03	NVA	NVA	---	NVA	---	---
4,4'-DDE	59/170	1.72E-02	1.20E-02	NVA	NVA	---	NVA	---	---
4,4'-DDT	37/170	6.89E-03	5.57E-03	NVA	3.7	---	3.7	1.86E-03	1.51E-03
Aldrin	8/170	2.82E-03	1.76E-03	NVA	NVA	---	NVA	---	---
alpha-Chlordane	16/71	2.60E-03	1.34E-03	NVA	2.2	---	2.2	1.18E-03	6.09E-04
Chlordane	1/161	2.39E-04	1.60E-04	NVA	2.2	---	2.2	1.09E-04	6.00E-03
cis-Nonachlor	5/52	3.91E-04	2.70E-04	NVA	2.2	---	2.2	1.78E-04	1.23E-04
Dieldrin	3/170	1.70E-03	1.51E-03	NVA	10	---	10	1.70E-04	1.61E-04
Endrin	9/170	4.06E-04	2.95E-04	NVA	0.0034	---	0.0034	0.1	0.6
gamma-Chlordane	1/19	5.38E-03	3.61E-03	NVA	2.2	---	2.2	2.45E-03	1.64E-03
Heptachlor	1/170	2.07E-04	1.65E-04	NVA	0.4	---	0.4	5.18E-04	2.83E-03
Hexachlorobenzene	2/545	1.08E-01	1.48E-02	NVA	NVA	---	NVA	---	---
Pentachloro-anisole	14/52	8.77E-04	5.07E-04	NVA	NVA	---	NVA	---	---
Perchlorate	83/278	3.79E+00	2.93E+00	NVA	NVA	---	NVA	---	---
trans-Nonachlor	6/52	4.15E-04	2.72E-04	NVA	2.2	---	2.2	1.89E-04	1.24E-04

Notes:

[a] Constituents of potential ecological concern (COPECs) based on results of screening assessment.

[b] Screening toxicity values for plants from Efroymson, R.A., Will, M.E., Suter II, G.W., and Wooten, A.C., 1997b, *Toxicological Benchmarks for Screening Contaminants of Potential Concern for Effects on Terrestrial Plants: 1997 Revision,* Lockheed Martin Energy Systems, Inc. ES/ER/TM-85/R3.

Table 7-2
Direct Contact Toxicity Evaluation for Plants
Total Soil
Industrial Sub-Area

[c] Lower of the available screening values from LANL (Los Alamos National Laboratory), 2005, Environmental Restoration (ER) Project Ecorisk Database (Release 2.2), September, and USEPA (United States Environmental Protection Agency), 2005, Guidance for Developing Ecological Soil Screening Levels (Eco-SSL), Office of Solid Waste and Emergency Response, Website version last updated March 15, 2005: http://www.epa.gov/ecotox/ecossl (Eco-SSL for Plants).

[d] Tier 1 EEQ is estimated by dividing the concentration equal to the 95 % UCL of the mean by the relevant direct contact screening value.

[e] Tier 2 EEQ is estimated by dividing the arithmetic average concentration by the relevant direct contact screening value.

Cr III trivalent chromium
Cr VI hexavalent chromium
EEQ ecological effects quotient
LANL Los Alamos National Laboratory
mg/kg milligrams per kilogram
NVA no value available
ORNL Oak Ridge National Laboratory
TCDD tetrachlorodibenzodioxin
TEQ toxicity equivalency quotient
UCL upper confidence limit

Table 7-3
Direct Contact Toxicity Evaluation for Earthworms
Total Soil
Low Impact Sub-Area

Chemical [a]	Detection Frequency	95 % UCL (mg/kg)	Mean (mg/kg)	ORNL Screening Toxicity Value [b] (mg/kg)	LANL/Eco-SSL Screening Toxicity Value [c] (mg/kg)	Comment on Screening Value	Relevant Screening Value (mg/kg)	Tier 1 EEQ [d]	Tier 2 EEQ [e]
Antimony	16/36	5.68E-01	5.12E-01	NVA	78	---	78	0.01	0.01
Cadmium	31/144	3.95E-01	3.19E-01	20	---	---	20	0.020	0.016
Chromium	145/145	1.16E+01	1.09E+01	32	---	Cr III	32	0.36	0.34
Chromium	145/145	1.16E+01	1.09E+01	0.4	---	Cr VI	0.4	29	27
Copper	124/124	7.35E+00	6.48E+00	50	---	---	50	0.15	0.13
Iron	124/124	1.01E+04	9.10E+03	NVA	NVA	---	NVA	---	---
Lead	147/147	2.30E+01	2.03E+01	500	---	---	500	0.046	0.041
Manganese	124/124	9.62E+02	8.30E+02	NVA	NVA	---	NVA	---	---
Mercury (Inorganic)	110/145	5.69E-02	5.07E-02	0.1	---	For organic and inorganic forms	0.1	0.57	0.51
Nickel	129/144	6.83E+00	6.19E+00	200	---	---	200	0.034	0.031
Selenium	39/147	3.97E-01	3.70E-01	70	---	---	70	0.006	0.005
Strontium	124/124	1.43E+01	1.30E+01	NVA	NVA	---	NVA	---	---
Vanadium	107/107	1.54E+01	1.45E+01	NVA	NVA	---	NVA	---	---
Zinc	121/124	5.97E+01	4.80E+01	200	---	---	200	0.30	0.24
Nitrate	10/15	1.86E+00	1.13E+00	NVA	NVA	---	NVA	---	---
Sulfate	15/15	2.06E+03	1.38E+03	NVA	NVA	---	NVA	---	---
2,3,7,8-TCDD TEQ	10/10	3.95E-06	3.18E-06	NVA	5	2,3,7,8-TCDD	5	7.90E-07	6.36E-07
Aroclor 1242	43/105	3.04E-03	2.53E-03	NVA	NVA	---	NVA	---	---
Aroclor 1248	12/105	1.37E-03	1.17E-03	NVA	NVA	---	NVA	---	---
Aroclor 1254	41/105	4.04E-03	3.27E-03	NVA	NVA	---	NVA	---	---
Aroclor 1260	35/105	6.22E-03	4.04E-03	NVA	NVA	---	NVA	---	---
Aroclor 1268	1/101	8.97E-04	8.43E-04	NVA	NVA	---	NVA	---	---
4,4'-DDD	10/108	1.42E-03	8.25E-04	NVA	NVA	---	NVA	---	---
4,4'-DDE	101/108	4.15E-03	3.08E-03	NVA	NVA	---	NVA	---	---
4,4'-DDT	47/108	1.82E-03	1.10E-03	NVA	NVA	---	NVA	---	---
Aldrin	2/108	2.04E-04	1.81E-04	NVA	NVA	---	NVA	---	---
alpha-Chlordane	20/107	3.68E-04	3.11E-04	NVA	NVA	---	NVA	---	---
Chlordane	4/108	1.93E-04	2.16E-04	NVA	NVA	---	NVA	---	---
cis-Nonachlor	11/107	2.52E-04	2.19E-04	NVA	NVA	---	NVA	---	---
Dieldrin	3/108	1.88E-04	1.76E-04	NVA	NVA	---	NVA	---	---
Endrin	21/108	2.77E-04	2.64E-04	NVA	NVA	---	NVA	---	---
Hexachlorobenzene	12/107	2.36E-04	2.04E-04	NVA	NVA	---	NVA	---	---
Mirex	20/107	3.43E-04	2.87E-04	NVA	NVA	---	NVA	---	---
Oxychlordane	2/107	1.84E-04	1.71E-04	NVA	NVA	---	NVA	---	---
Pentachloro-anisole	25/107	9.03E-04	5.57E-04	NVA	NVA	---	NVA	---	---
trans-Nonachlor	19/107	3.16E-04	2.64E-04	NVA	NVA	---	NVA	---	---
Perchlorate	1/7	9.01E-02	4.97E-02	NVA	NVA	---	NVA	---	---
Benzoic Acid	11/126	2.50E-02	1.29E-01	NVA	NVA	---	NVA	---	---
Pentachlorophenol	6/143	5.32E-01	3.80E-01	400	---	---	400	0.0013	0.0009

Notes:

[a] Constituents of potential ecological concern (COPECs) based on results of screening assessment.

[b] Screening toxicity values for earthworms from Efroymson, R.A., Will, M.E., and Suter II, G.W., 1997c, *Toxicological Benchmarks for Contaminants of Potential Concern for Effects on Soil and Litter Invertebrates and Heterotrophic Processes: 1997 Revision*, Lockheed Martin Energy Systems, Inc. ES/ER/TM-126/R2.

[c] Lower of the available screening values from LANL (Los Alamos National Laboratory), 2005, Environmental Restoration (ER) Project Ecorisk Database (Release 2.2), September, and USEPA (United States Environmental Protection Agency), 2005, Guidance for Developing Ecological Soil Screening Levels (Eco-SSL), Office of Solid Waste and Emergency Response, Website version last updated March 15, 2005: http://www.epa.gov/ecotox/ecossl (Eco-SSL for Soil Invertebrates).

Table 7-3
Direct Contact Toxicity Evaluation for Earthworms
Total Soil
Low Impact Sub-Area

[d] Tier 1 EEQ is estimated by dividing the concentration equal to the 95 % UCL of the mean by the relevant direct contact screening value.

[e] Tier 2 EEQ is estimated by dividing the arithmetic average concentration by the relevant direct contact screening value.

Cr III trivalent chromium
Cr VI hexavalent chromium
EEQ ecological effects quotient
LANL Los Alamos National Laboratory
mg/kg milligrams per kilogram
NVA no value available
ORNL Oak Ridge National Laboratory
TCDD tetrachlorodibenzodioxin
TEQ toxicity equivalency quotient
UCL upper confidence limit

Table 7-4
Direct Contact Toxicity Evaluation for Plants
Total Soil
Low Impact Sub-Area

Chemical [a]	Detection Frequency	95 % UCL (mg/kg)	Mean (mg/kg)	ORNL Screening Toxicity Value [b] (mg/kg)	LANL/Eco-SSL Screening Toxicity Value [c] (mg/kg)	Comment on Screening Value	Relevant Screening Value (mg/kg)	Tier 1 EEQ [d]	Tier 2 EEQ [e]
Antimony	16/36	5.68E-01	5.12E-01	5	---	---	5	0.11	0.10
Cadmium	31/144	3.95E-01	3.19E-01	4	---	---	4	0.099	0.080
Chromium	145/145	1.16E+01	1.09E+01	1	---	Cr III	1	11.6	10.9
Chromium	145/145	1.16E+01	1.09E+01	NVA	0.35	Cr VI	0.35	33	31
Copper	124/124	7.35E+00	6.48E+00	100	---	---	100	0.074	0.065
Iron	124/124	1.01E+04	9.10E+03	NVA	NVA	---	NVA	---	---
Lead	147/147	2.30E+01	2.03E+01	50	---	---	50	0.46	0.41
Manganese	124/124	9.62E+02	8.30E+02	500	---	---	500	1.9	1.7
Mercury (Inorganic)	110/145	5.69E-02	5.07E-02	0.3	---	---	0.3	0.19	0.17
Nickel	129/144	6.83E+00	6.19E+00	30	---	---	30	0.23	0.21
Selenium	39/147	3.97E-01	3.70E-01	1	---	---	1	0.40	0.37
Strontium	124/124	1.43E+01	1.30E+01	NVA	NVA	---	NVA	---	---
Vanadium	107/107	1.54E+01	1.45E+01	2	---	---	2	7.7	7.3
Zinc	121/124	5.97E+01	4.80E+01	50	---	---	50	1.19	0.96
Nitrate	10/15	1.86E+00	1.13E+00	NVA	NVA	---	NVA	---	---
Sulfate	15/15	2.06E+03	1.38E+03	NVA	NVA	---	NVA	---	---
2,3,7,8-TCDD TEQ	10/10	3.95E-06	3.18E-06	NVA	NVA	---	NVA	---	---
Aroclor 1242	43/105	3.04E-03	2.53E-03	40	---	---	40	7.60E-05	6.33E-05
Aroclor 1248	12/105	1.37E-03	1.17E-03	40	---	---	40	3.43E-05	2.93E-05
Aroclor 1254	41/105	4.04E-03	3.27E-03	40	---	---	40	1.01E-04	8.18E-05
Aroclor 1260	35/105	6.22E-03	4.04E-03	40	---	---	40	1.56E-04	1.01E-04
Aroclor 1268	1/101	8.97E-04	8.43E-04	40	---	---	40	2.24E-05	2.11E-05
4,4'-DDD	10/108	1.42E-03	8.25E-04	NVA	NVA	---	NVA	---	---
4,4'-DDE	101/108	4.15E-03	3.08E-03	NVA	NVA	---	NVA	---	---
4,4'-DDT	47/108	1.82E-03	1.10E-03	NVA	3.7	---	3.7	4.92E-04	2.97E-04
Aldrin	2/108	2.04E-04	1.81E-04	NVA	NVA	---	NVA	---	---
alpha-Chlordane	20/107	3.68E-04	3.11E-04	NVA	2.2	---	2.2	1.67E-04	1.41E-04
Chlordane	4/108	1.93E-04	2.16E-04	NVA	2.2	---	2.2	8.77E-05	9.82E-05
cis-Nonachlor	11/107	2.52E-04	2.19E-04	NVA	2.2	---	2.2	1.15E-04	9.95E-05
Dieldrin	3/108	1.88E-04	1.76E-04	NVA	10	---	10	1.88E-05	1.76E-05
Endrin	21/108	2.77E-04	2.64E-04	NVA	0.0034	---	0.0034	---	---
Hexachlorobenzene	12/107	2.36E-04	2.04E-04	NVA	NVA	---	NVA	---	---
Mirex	20/107	3.43E-04	2.87E-04	NVA	NVA	---	NVA	---	---
Oxychlordane	2/107	1.84E-04	1.71E-04	NVA	2.2	---	2.2	8.36E-05	7.77E-05
Pentachloro-anisole	25/107	9.03E-04	5.57E-04	NVA	NVA	---	NVA	---	---
trans-Nonachlor	19/107	3.16E-04	2.64E-04	NVA	2.2	---	2.2	1.44E-04	1.20E-04
Perchlorate	1/7	9.01E-02	4.97E-02	NVA	NVA	---	NVA	---	---
Benzoic Acid	11/126	2.50E-02	1.29E-01	NVA	NVA	---	NVA	---	---
Pentachlorophenol	6/143	5.32E-01	3.80E-01	3	---	---	3	0.18	0.13

Notes:

[a] Constituents of potential ecological concern (COPECs) based on results of screening assessment.

[b] Screening toxicity values for plants from Efroymson, R.A., Will, M.E., Suter II, G.W., and Wooten, A.C., 1997b, *Toxicological Benchmarks for Screening Contaminants of Potential Concern for Effects on Terrestrial Plants: 1997 Revision,* Lockheed Martin Energy Systems, Inc. ES/ER/TM-85/R3.

[c] Lower of the available screening values from LANL (Los Alamos National Laboratory), 2005, Environmental Restoration (ER) Project Ecorisk Database (Release 2.2), September, and USEPA (United States Environmental Protection Agency), 2005, Guidance for Developing Ecological Soil Screening Levels (Eco-SSL), Office of Solid Waste and Emergency Response, Website version last updated March 15, 2005: http://www.epa.gov/ecotox/ecossl (Eco-SSL for Plants).

Table 7-4
Direct Contact Toxicity Evaluation for Plants
Total Soil
Low Impact Sub-Area

[d] Tier 1 EEQ is estimated by dividing the concentration equal to the 95 % UCL of the mean by the relevant direct contact screening value.
[e] Tier 2 EEQ is estimated by dividing the arithmetic average concentration by the relevant direct contact screening value.

Cr III trivalent chromium
Cr VI hexavalent chromium
EEQ ecological effects quotient
LANL Los Alamos National Laboratory
mg/kg milligrams per kilogram
NVA no value available
ORNL Oak Ridge National Laboratory
TCDD tetrachlorodibenzodioxin
TEQ toxicity equivalency quotient
UCL upper confidence limit

Table 7-5
Direct Contact Toxicity Evaluation for Earthworms
Total Soil
Waste Sub-Area

Chemical [a]	Detection Frequency	95 % UCL (mg/kg)	Mean (mg/kg)	ORNL Screening Toxicity Value [b] (mg/kg)	LANL/Eco-SSL Screening Toxicity Value [c] (mg/kg)	Comment on Screening Value	Relevant Screening Value (mg/kg)	Tier 1 EEQ [d]	Tier 2 EEQ [e]
Aluminum	26/26	9.30E+03	8.02E+03	NVA	NVA	---	NVA	---	---
Antimony	3/48	8.22E-01	6.95E-01	NVA	78	---	78	0.011	0.009
Barium	103/103	5.53E+02	4.81E+02	NVA	330	---	330	1.7	1.5
Cadmium	17/103	6.67E-01	5.66E-01	20	---	---	20	0.03	0.03
Chromium	103/103	1.72E+01	1.57E+01	32	---	Cr III	32	0.54	0.49
Chromium	103/103	1.72E+01	1.57E+01	0.4	---	Cr VI	0.4	43	39
Copper	39/39	1.15E+01	9.30E+00	50	---	---	50	0.23	0.19
Iron	26/26	1.42E+04	1.27E+04	NVA	NVA	---	NVA	---	---
Lead	103/103	5.58E+01	4.62E+01	500	---	---	500	0.11	0.09
Mercury (Inorganic)	24/103	9.67E-02	8.59E-02	0.1	---	For organic and inorganic forms	0.1	0.97	0.86
Nickel	94/98	8.42E+00	7.73E+00	200	---	---	200	0.04	0.04
Selenium	22/103	6.71E-01	5.94E-01	70	---	---	70	0.01	0.01
Strontium	26/26	2.71E+01	2.12E+01	NVA	NVA	---	NVA	---	---
Vanadium	22/22	2.36E+01	2.08E+01	NVA	NVA	---	NVA	---	---
Zinc	39/39	5.17E+01	4.15E+01	200	---	---	200	0.26	0.21
Nitrate	13/25	1.34E+00	1.00E+00	NVA	NVA	---	NVA	---	---
Sulfate	23/25	4.00E+02	2.41E+02	NVA	NVA	---	NVA	---	---
2,3,7,8-TCDD TEQ	15/15	3.40E-05	2.05E-05	NVA	5	2,3,7,8-TCDD	5	6.80E-06	4.10E-06
1,3,5-Trinitrobenzene	11/70	1.71E+01	1.26E+01	NVA	NVA	---	NVA	---	---
2,4,6-Trinitrotoluene	11/70	2.87E+02	1.48E+02	NVA	0.07	---	0.07	4,100	2,114
1,3-Dinitrobenzene	3/70	1.24E+00	1.14E+00	NVA	NVA	---	NVA	---	---
2,4-Dinitrotoluene	11/82	1.01E+02	5.04E+01	NVA	NVA	---	NVA	---	---
2,6-Dinitrotoluene	14/84	1.36E+01	7.15E+00	NVA	NVA	---	NVA	---	---
HMX	7/70	1.36E+00	1.00E+00	NVA	500	---	500	0.003	0.002
Aroclor 1242	2/21	3.08E-03	2.09E-03	NVA	NVA	---	NVA	---	---
Aroclor 1254	3/21	6.24E-03	4.33E-03	NVA	NVA	---	NVA	---	---
Aroclor 1260	3/21	2.60E-03	1.97E-03	NVA	NVA	---	NVA	---	---
4,4'-DDD	2/21	5.15E-04	3.62E-04	NVA	NVA	---	NVA	---	---
4,4'-DDE	4/21	2.45E-03	1.86E-03	NVA	NVA	---	NVA	---	---
4,4'-DDT	2/21	2.93E-04	2.21E-04	NVA	NVA	---	NVA	---	---
alpha-Chlordane	1/6	2.13E-04	1.98E-04	NVA	NVA	---	NVA	---	---
Endrin	1/21	4.91E-04	3.35E-04	NVA	NVA	---	NVA	---	---
Mirex	1/6	2.89E-04	2.38E-04	NVA	NVA	---	NVA	---	---
Pentachloro-anisole	1/6	2.58E-04	2.05E-04	NVA	NVA	---	NVA	---	---
Perchlorate	42/116	2.61E-01	1.63E-01	NVA	NVA	---	NVA	---	---
Butyl benzyl phthalate	3/42	5.43E-01	4.45E-01	NVA	NVA	---	NVA	---	---
Hexachlorobenzene	2/42	1.01E-01	6.30E-02	NVA	NVA	---	NVA	---	---
p-Isopropyltoluene	1/16	4.40E-03	3.13E-03	NVA	NVA	---	NVA	---	---

Notes:

[a] Constituents of potential ecological concern (COPECs) based on results of screening assessment.

[b] Screening toxicity values for earthworms from Efroymson, R.A., Will, M.E., and Suter II, G.W., 1997c, *Toxicological Benchmarks for Contaminants of Potential Concern for Effects on Soil and Litter Invertebrates and Heterotrophic Processes: 1997 Revision*, Lockheed Martin Energy Systems, Inc. ES/ER/TM-126/R2,

[c] Lower of the available screening values from LANL (Los Alamos National Laboratory), 2005, Environmental Restoration (ER) Project Ecorisk Database (Release 2.2), September, and USEPA (United States Environmental Protection Agency), 2005, Guidance for Developing Ecological Soil Screening Levels (Eco-SSL), Office of Solid Waste and Emergency Response, Website version last updated March 15, 2005: http://www.epa.gov/ecotox/ecossl (Eco-SSL for Soil Invertebrates).

[d] Tier 1 EEQ is estimated by dividing the concentration equal to the 95 % UCL of the mean by the relevant direct contact screening value.

[e] Tier 2 EEQ is estimated by dividing the arithmetic average concentration by the relevant direct contact screening value.

Cr III trivalent chromium
Cr VI hexavalent chromium
EEQ ecological effects quotient
LANL Los Alamos National Laboratory
mg/kg milligrams per kilogram
NVA no value available
ORNL Oak Ridge National Laboratory
TCDD tetrachlorodibenzodioxin
TEQ toxicity equivalency quotient
UCL upper confidence limit

Table 7-6
Direct Contact Toxicity Evaluation for Plants
Total Soil
Waste Sub-Area

Chemical [a]	Detection Frequency	95 % UCL (mg/kg)	Mean (mg/kg)	ORNL Screening Toxicity Value [b] (mg/kg)	LANL/Eco-SSL Screening Toxicity Value [c] (mg/kg)	Comment on Screening Value	Relevant Screening Value (mg/kg)	Tier 1 EEQ [d]	Tier 2 EEQ [e]
Aluminum	26/26	9.30E+03	8.02E+03	50	---	---	50	186	160
Antimony	3/48	8.22E-01	6.95E-01	5	---	---	5	0.16	0.14
Barium	103/103	5.53E+02	4.81E+02	500	---	---	500	1.11	0.96
Cadmium	17/103	6.67E-01	5.66E-01	4	---	---	4	0.2	0.1
Chromium	103/103	1.72E+01	1.57E+01	1	---	Cr III	1	17	16
Chromium	103/103	1.72E+01	1.57E+01	NVA	0.35	Cr VI	0.35	49	45
Copper	39/39	1.15E+01	9.30E+00	100	---	---	100	0.115	0.093
Iron	26/26	1.42E+04	1.27E+04	NVA	NVA	---	NVA	---	---
Lead	103/103	5.58E+01	4.62E+01	50	---	---	50	1.1	0.9
Mercury (Inorganic)	24/103	9.67E-02	8.59E-02	0.3	---	---	0.3	0.3	0.3
Nickel	94/98	8.42E+00	7.73E+00	30	---	---	30	0.3	0.3
Selenium	22/103	6.71E-01	5.94E-01	1	---	---	1	0.7	0.6
Strontium	26/26	2.71E+01	2.12E+01	NVA	NVA	---	NVA	---	---
Vanadium	22/22	2.36E+01	2.08E+01	2	---	---	2	12	10
Zinc	39/39	5.17E+01	4.15E+01	50	---	---	50	1.03	0.83
Nitrate	13/25	1.34E+00	1.00E+00	NVA	NVA	---	NVA	---	---
Sulfate	23/25	4.00E+02	2.41E+02	NVA	NVA	---	NVA	---	---
2,3,7,8-TCDD TEQ	15/15	3.40E-05	2.05E-05	NVA	NVA	---	NVA	---	---
1,3,5-Trinitrobenzene	11/70	1.71E+01	1.26E+01	NVA	NVA	---	NVA	---	---
2,4,6-Trinitrotoluene	11/70	2.87E+02	1.48E+02	NVA	0.7	---	0.7	410	211
1,3-Dinitrobenzene	3/70	1.24E+00	1.14E+00	NVA	NVA	---	NVA	---	---
2,4-Dinitrotoluene	11/82	1.01E+02	5.04E+01	NVA	NVA	---	NVA	---	---
2,6-Dinitrotoluene	14/84	1.36E+01	7.15E+00	NVA	NVA	---	NVA	---	---
HMX	7/70	1.36E+00	1.00E+00	NVA	NVA	---	NVA	---	---
Aroclor 1242	2/21	3.08E-03	2.09E-03	40	---	---	40	7.70E-05	5.23E-05
Aroclor 1254	3/21	6.24E-03	4.33E-03	40	---	---	40	1.56E-04	1.08E-04
Aroclor 1260	3/21	2.60E-03	1.97E-03	40	---	---	40	6.50E-05	4.94E-05
4,4'-DDD	2/21	5.15E-04	3.62E-04	NVA	NVA	---	NVA	---	---
4,4'-DDE	4/21	2.45E-03	1.86E-03	NVA	NVA	---	NVA	---	---
4,4'-DDT	2/21	2.93E-04	2.21E-04	NVA	3.7	---	3.7	7.92E-05	0.000
alpha-Chlordane	1/6	2.13E-04	1.98E-04	NVA	2.2	---	2.2	9.68E-05	9.00E-05
Endrin	1/21	4.91E-04	3.35E-04	NVA	0.0034	---	0.0034	0.14	0.10
Mirex	1/6	2.89E-04	2.38E-04	NVA	NVA	---	NVA	---	---
Pentachloro-anisole	1/6	2.58E-04	2.05E-04	NVA	NVA	---	NVA	---	---
Perchlorate	42/116	2.61E-01	1.63E-01	NVA	NVA	---	NVA	---	---
Butyl benzyl phthalate	3/42	5.43E-01	4.45E-01	NVA	NVA	---	NVA	---	---
Hexachlorobenzene	2/42	1.01E-01	6.30E-02	NVA	NVA	---	NVA	---	---
p-Isopropyltoluene	1/16	4.40E-03	3.13E-03	NVA	NVA	---	NVA	---	---

Notes:

[a] Constituents of potential ecological concern (COPECs) based on results of screening assessment.

[b] Screening toxicity values for plants from Efroymson, R.A., Will, M.E., Suter II, G.W., and Wooten, A.C., 1997b, *Toxicological Benchmarks for Screening Contaminants of Potential Concern for Effects on Terrestrial Plants: 1997 Revision,* Lockheed Martin Energy Systems, Inc. ES/ER/TM-85/R3.

[c] Lower of the available screening values from LANL (Los Alamos National Laboratory), 2005, Environmental Restoration (ER) Project Ecorisk Database (Release 2.2), September, and USEPA (United States Environmental Protection Agency), 2005, Guidance for Developing Ecological Soil Screening Levels (Eco-SSL), Office of Solid Waste and Emergency Response, Website version last updated March 15, 2005: http://www.epa.gov/ecotox/ecossl (Eco-SSL for Plants).

[d] Tier 1 EEQ is estimated by dividing the concentration equal to the 95 % UCL of the mean by the relevant direct contact screening value.

[e] Tier 2 EEQ is estimated by dividing the arithmetic average concentration by the relevant direct contact screening value.

Cr III trivalent chromium
Cr VI hexavalent chromium
EEQ ecological effects quotient
LANL Los Alamos National Laboratory
mg/kg milligrams per kilogram
NVA no value available
ORNL Oak Ridge National Laboratory
TCDD tetrachlorodibenzodioxin
TEQ toxicity equivalency quotient
UCL upper confidence limit

Table 7-7
Surface Water Direct Contact Assessment for Aquatic Life
Harrison Bayou

COPEC	95% UCL (ug/L)	Mean (ug/L)	NAWQC[a] (ug/L)		Texas Surface Water Quality Criteria[b] (ug/L)		Texas Ecological Benchmarks for Water[c] (ug/L)	Tier II Secondary Values[d] (ug/L)		Lowest Chronic Values[d] (ug/L)				EPA Region 4 Ecological Benchmarks for Surface Water[e] Chronic (ug/L)	Weight of Evidence Exceedance		Promulgated Criteria Exceeded?
			Acute	Chronic	Acute	Chronic		Acute	Chronic	Fish	Daphnids	Non-Daphnids	Aquatic Plants		Using UCL	Using Mean	
2,3,7,8-TCDD TEQ	9.44E-06	8.00E-06	---	---	---	---	---	---	---	---	---	---	---	1.00E-05	0/1	0/1	---
Aluminum (dissolved)	6.50E+03	3.59E+03	---	---	991	---	---	---	---	---	---	---	---	---	8/8	8/8	Yes
Aluminum (total)	2.03E+04	1.12E+04	750[f]	87[f]	---	---	87	---	---	3,288	1,900	---	460	87			
Barium	2.58E+02	2.09E+02	---	---	---	---	4	110	4	---	---	---	---	---	3/3	3/3	---
Chromium (dissolved)	2.53E+00	1.99E+00	400[g]	52[g]	193[h]	62.8[h]	101	---	---	---	---	---	---	---	3/9	2/9	No
Chromium (total)	1.27E+01	9.95E+00	---	---	---	---	---	---	---	68.63	6.132	---	2	11			
Copper (dissolved)	5.74E+00	4.04E+00	9.0[g]	6.2[g]	5.55[h]	4.14[h]	7	---	---	---	---	---	---	---	7/10	5/10	Yes
Copper (total)	1.69E+01	1.19E+01	---	---	---	---	---	---	---	3.8	0.23	6.066	1	6.54			
Iron	2.91E+04	1.61E+04	---	1,000	---	---	1,000	---	---	1,300	158	---	---	1,000	5/5	5/5	Yes
Lead (dissolved)	1.30E+00	1.02E+00	40.3[g]	1.6[g]	14.4[h]	0.49[h]	1	---	---	---	---	---	---	---	3/10	3/10	Yes
Lead (total)	7.24E+00	5.66E+00	---	---	---	---	---	---	---	18.88	12.26	25.46	500	1.32			
Manganese	7.90E+02	6.92E+02	---	---	---	---	120	2,300	120	1,780	<1,100	---	---	---	2/5	2/5	---
Nitrate	7.46E+02	4.32E+02	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Nitrate/Nitrite	5.84E+04	2.93E+04	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Selenium	4.63E+00	3.90E+00	---	5	20	5	5	---	---	88.32	91.65	---	100	5	0/8	0/8	No
Sulfates	5.76E+04	4.15E+04	---	---	50,000[i]		---	---	---	---	---	---	---	---	1/1	0/1	No[j]
Thallium	7.55E-01	5.86E-01	---	---	---	---	40	110	12	57	130	---	100	4	0/7	0/7	---
Vanadium	6.18E+01	4.29E+01	---	---	---	---	20	280	20	80	1,900	---	---	---	2/5	2/5	---

Notes:

Dissolved metal concentrations were adjusted for total water concentrations using the following information:
(From Table 7 in TCEQ, 2003, *Procedures to Implement the Texas Surface Water Quality Standards* [RG-194], January)

--- No Value Available

COPEC Constituent of potential ecological concern

EPC Exposure Point Concentration. The 95% UCL was selected as the EPC unless it exceeded the maximum detected concentration, in which case the MDC was chosen as the EPC.

MDC Maximum detected concentration

NAWQC National Ambient Water Quality Criteria

95% UCL 95% upper confidence limit concentration

Table 7-7
Surface Water Direct Contact Assessment for Aquatic Life
Harrison Bayou

Metal	Stream Intercept (b)	Stream Slope (m)	TSS (mg/L)	Estimated Kp	Cd/Ct
Arsenic	5.68	-0.73	10	8.91E+04	0.53
Cadmium	6.6	-1.13	10	2.95E+05	0.25
Chromium	6.52	-0.93	10	3.89E+05	0.20
Copper	6.02	-0.74	10	1.91E+05	0.34
Lead	6.45	-0.8	10	4.47E+05	0.18
Mercury	6.46	-1.14	10	2.09E+05	0.32
Nickel	5.69	-0.57	10	1.32E+05	0.43
Silver	6.38	-1.03	10	2.24E+05	0.31
Zinc	6.1	-0.7	10	2.51E+05	0.28
					0.32 = Arithmetic mean

Total suspended solids (TSS) estimate from USEPA 1999

$Kp = 10^b \times TSS^m$, with slope and intercept values b and m from Table 7 in TCEQ (2003).

Dissolved Conc (C_d)/Total Conc (C_t) = (1+(Kp*TSS*1E-6))

The arithmetic mean of C_d/C_t was used for inorganic chemicals not included in the above table.

[a] Values from EPA, 2002, National Recommended Water Quality Criteria: 2002. EPA 822-R-02-047.

[b] Values from Texas Surface Water Quality Standards, Texas Natural Resource Conservation Commission (TNRCC), Chapter 307.1 - 307.10, August 17, 2000.

[c] Values from Texas Natural Resources Conservation Commission (TNRCC). December 2001. Guidance for Conducting Ecological Risk Assessments at Remediation Sites in Texas, RG-263 (revised).

[d] Unless otherwise noted, values from Suter, G.W., and Tsao, C.L. 1996. Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Aquatic Biota: 1996 Revision. ES/ER/TM-96/R2.

[e] EPA Region 4 Ecological Benchmark Screening Values for Surface Water.

[f] Aluminum pH of 6.5 to 9.0

[g] Criteria were adjusted for hardness following the equations presented in USEPA 2002. National Recommended Water Quality Criteria-Correction. EPA 822-R-02-047. Surface water hardness measured at the site ranges from 40 to 100 mg/L and averages 65 mg/L. Average on-site hardness was used to adjust the criteria.

[h] Criteria were adjusted for hardness following the equations presented in Texas Surface Water Quality Standards, TNRCC, Chapter 307.1 - 307.10, August 17, 2000. 15th percentile site-specific surface water hardness value of 28 mg/L (from all four watersheds) was used to adjust the criteria.

[i] Texas water quality criterion for sulfate in Caddo Lake.

[j] Although Caddo Lake sulfate criterion was exceeded by the 95% UCL concentration in the Bayou, actual sulfate levels in Caddo Lake are not expected to exceed the criterion, due to dilution as Bayou flows enter the Lake.

Table 7-8
Sediment Direct Contact Assessment for Aquatic Life
Harrison Bayou

COPEC	95% UCL (mg/kg)	Mean (mg/kg)	Texas Ecological Benchmarks for Sediment[a]	ARCS[b]			SQB [b,c] (mg/kg)	Canadian ISQG[d] (mg/kg)	Canadian PEL[d] (mg/kg)	NOAA[b]		FDEP[e]		EPA Region 4 Ecological Benchmarks for Sediment[f] (mg/kg)	Weight of Evidence Exceedence	
				TEC (mg/kg)	PEC (mg/kg)	NEC (mg/kg)				ER-L (mg/kg)	ER-M (mg/kg)	TEC (mg/kg)	PEC (mg/kg)		Using UCL	Using Mean
2,3,7,8-TCDD TEQ	1.41E-05	4.00E-06	---	---	---	---	---	8.5E-07	2.15E-05	---	---	---	---	2.50E-06	2/3	2/3
Aluminum	1.03E+04	7.50E+03	---	---	58,030	73,160	---	---	---	---	---	---	---	---	0/2	0/2
Barium	2.86E+02	2.32E+02	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Bis(2-ethylhexyl) phthalate	2.82E-01	2.33E-01	---	---	---	---	890	---	---	---	---	---	---	0.182	1/2	1/2
Cadmium	1.83E-01	1.83E-01	0.99	0.592	11.7	41.1	---	0.6	3.5	1.2	9.6	0.99	4.98	1	0/11	0/11
Copper	7.78E+00	6.82E+00	31.6	28	77.7	54.8	---	35.7	197	34	270	31.6	149	18.7	0/11	0/11
Mercury	8.29E-02	6.13E-02	0.18	---	---	---	---	0.17	0.486	0.15	0.71	0.18	1.06	0.13	0/8	0/8
Nickel	1.10E+01	9.70E+00	22.7	39.6	38.5	37.9	---	---	---	20.9	51.6	22.7	48.6	15.9	0/9	0/9
Nitrate	7.48E-01	4.60E-01	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Selenium	9.08E-01	7.65E-01	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sulfates	7.51E+01	5.13E+01	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Thallium	6.00E-01	4.92E-01	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Vanadium	2.87E+01	2.13E+01	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Zinc	3.58E+01	3.15E+01	121	159	1,532	541	---	123	315	150	410	121	459	124	0/11	0/11

Notes:

ARCS, SQB, and Canadian values for freshwater environments.

NOAA and FDEP values for estuarine and marine environments, but may be used for screening purposes.

Tier 1 and Tier 2 measured sediment total organic carbon (TOC) at the site ranged from 7.3% to 11.6%.

[a] Values from Texas Natural Resources Conservation Commission (TRNCC). December 2005. Guidance for Conducting Ecological Risk Assessments at Remediation Sites in Texas, RG-263 (revised).

[b] Values from Jones, D.S and Suter, G.W. 1997. Toxicological Benchmarks for Screening Contaminants of Potential Concern for Effects on Sediment-Associated Biota: 1997 Revision ES/ER/TM-95/R4.

[c] The lowest of the Eq P-derived sediment quality benchmarks presented in Jones, D.S and Suter, G.W. 1997. Toxicological Benchmarks for Screening Contaminants of Potential Concern for Effects on Sediment-Associated Biota: 1997 Revision, ES/ER/TM-95/R4, is presented here (assumed TOC of 1%).

[d] Values from Canadian Council of Ministers of the Environment (CCME). 2002. Canadian Environmental Quality Guidelines. Summary Table Update 2002

[e] Values are from Florida DEP, 2003. Development and Evaluation of Numerical Sediment Quality Assessment Guidelines for Florida Inland Waters.

[f] EPA Region 4 Ecological Benchmark Screening Values for Sediment.

--- No Value Available

ARCS Assessment and Remediation of Contaminated Sediment

COPEC Chemical of Potential Ecological Concern

EPC Exposure Point Concentration. The 95% upper confidence limit concentration was selected as the EPC unless it exceeded the maximum detected concentration, in which case the MDC was chosen as the EPC.

ER-L Effect Range-Low

ER-M Effect Range Median

FDEP Florida Department of Environmental Protection

ISQG Interim Sediment Quality Guideline

MDC Maximum Detected Concentration

NEC High No Effect Concentration

NOAA National Oceanic and Atmospheric Administration

PEC Probable Effect Concentration

PEL Probably Effect Level

SQB Sediment Quality Benchmark

TEC Threshold Effect Concentration

TEL Threshold Effect Level

Table 7-9
Surface Water Direct Contact Assessment for Aquatic Life
Goose Prairie Creek

COPEC	95% UCL (ug/L)	Mean (ug/L)	NAWQC[a] (ug/L)		Texas Surface Water Quality Criteria[b] (ug/L)		Texas Ecological Benchmarks for Water[c] (ug/L)	Tier II Secondary Values[d] (ug/L)		Lowest Chronic Values[d] (ug/L)				EPA Region 4 Ecological Benchmarks for Surface Water[e] Chronic (ug/L)	Weight of Evidence Exceedence		Promulgated Criteria Exceeded?
			Acute	Chronic	Acute	Chronic		Acute	Chronic	Fish	Daphnids	Non-Daphnids	Aquatic Plants		Using UCL	Using Mean	
2,3,7,8-TCDD TEQ	8.59E-06	7.00E-06	---	---	---	---	---	---	---	---	---	---	---	1.00E-05	0/1	0/1	---
Aluminum (dissolved)	6.71E+02	5.54E+02	---	---	991	---	---	---	---	---	---	---	---	---	6/8	5/8	Yes
Aluminum (total)	2.10E+03	1.73E+03	750[f]	87[f]	---	---	87	---	---	3,288	1,900	---	460	87			
Barium	1.81E+02	1.38E+02	---	---	---	---	4	110	4	---	---	---	---	---	3/3	3/3	---
Bis(2-ethylhexyl) phthalate	2.43E+01	1.43E+01	---	---	---	---	7	27	3	---	912	---	---	0.3	3/5	3/5	---
Copper (dissolved)	8.25E+00	4.86E+00	6.6[g]	4.7[g]	5.55[h]	4.14[h]	7	---	---	---	---	---	---	---	10/10	7/10	Yes
Copper (total)	1.42E+01	1.23E+01	---	---	---	---	---	---	---	3.8	0.23	6.066	1	6.54			
Iron	3.14E+03	2.68E+03	---	1,000	---	---	1,000	---	---	1,300	158	---	---	1,000	5/5	5/5	Yes
Lead (dissolved)	1.40E+00	1.13E+00	28.1[g]	1.1[g]	14.4[h]	0.49[h]	1	---	---	---	---	---	---	---	4/10	4/10	Yes
Lead (total)	7.76E+00	6.26E+00	---	---	---	---	---	---	---	18.88	12.26	25.46	500	1.32			
Manganese	2.73E+02	2.12E+02	---	---	---	---	120	2,300	120	1,780	<1,100	---	---	---	2/5	2/5	---
Nitrate	8.86E+02	4.70E+02	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Nitrate/Nitrite	8.12E+01	6.18E+01	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Selenium	3.74E+00	3.23E+00	---	5	20	5	5	---	---	88.32	91.65	---	100	5	0/8	0/8	No
Sulfates	1.42E+04	1.10E+04	---	---	50,000[i]		---	---	---	---	---	---	---	---	0/1	0/1	No
Thallium	1.17E+00	1.00E+00	---	---	---	---	40	110	12	57	130	---	100	4	0/7	0/7	---
Zinc (dissolved)	2.46E+01	1.82E+01	62[g]	62[g]	38.9[h]	35.5[h]	58.1	---	---	---	---	---	---	---	4/10	4/10	No
Zinc (total)	8.78E+01	6.50E+01	---	---	---	---	---	---	---	36.41	46.73	>5,243	30	58.9			

Notes:

Dissolved metal concentrations were adjusted for total water concentrations using the following information:
(From Table 7 in TCEQ, 2003, *Procedures to Implement the Texas Surface Water Quality Standards* [RG-194], January)

--- No Value Available

COPEC Chemical of potential ecological concern

EPC Exposure Point Concentration. The 95% UCL was selected as the EPC unless it exceeded the maximum detected concentration, in which case the MDC was chosen as the EPC.

MDC Maximum Detected Concentration

NAWQC National Ambient Water Quality Criteria

95% UCL 95% upper confidence limit concentration

Table 7-9
Surface Water Direct Contact Assessment for Aquatic Life
Goose Prairie Creek

Metal	Stream Intercept (b)	Stream Slope (m)	TSS (mg/L)	Estimated Kp	Cd/Ct
Arsenic	5.68	-0.73	10	8.91E+04	0.53
Cadmium	6.6	-1.13	10	2.95E+05	0.25
Chromium	6.52	-0.93	10	3.89E+05	0.20
Copper	6.02	-0.74	10	1.91E+05	0.34
Lead	6.45	-0.8	10	4.47E+05	0.18
Mercury	6.46	-1.14	10	2.09E+05	0.32
Nickel	5.69	-0.57	10	1.32E+05	0.43
Silver	6.38	-1.03	10	2.24E+05	0.31
Zinc	6.1	-0.7	10	2.51E+05	0.28
					0.32 = Arithmetic mean

Total suspended solids (TSS) estimate from USEPA, 1999.

$Kp = 10^b \times TSS^m$, with slope and intercept values b and m from Table 7 in TCEQ (2003).

Dissolved Conc (C_d)/Total Conc (C_t) = (1+(Kp*TSS*1E-6))

The arithmetic mean of C_d/C_t was used for inorganic chemicals not included in the above table.

[a] Values from EPA, 2002. National Recommended Water Quality Criteria: 2002. EPA 822-R-02-047.

[b] Values from Texas Surface Water Quality Standards, Texas Natural Resource Conservation Commission (TNRCC), Chapter 307.1 - 307.10, August 17, 2000.

[c] Values from Texas Natural Resources Conservation Commission (TNRCC). December 2001. Guidance for Conducting Ecological Risk Assessments at Remediation Sites in Texas, RG-263 (revised).

[d] Unless otherwise noted, values from Suter, G.W., and Tsao, C.L. 1996. Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Aquatic Biota: 1996 Revision. ES/ER/TM-96/R2.

[e] EPA Region 4 Ecological Benchmark Screening Values for Surface Water.

[f] Aluminum pH of 6.5-9.0

[g] Criteria were adjusted for hardness following the equations presented in USEPA 2002. National Recommended Water Quality Criteria-Correction. EPA 822-R-02-047. Surface water hardness measured at the site ranges from 28 to 68 mg/L and averages 47 mg/L. Average on-site hardness was used to adjust the criteria.

[h] Criteria were adjusted for hardness following the equations presented in Texas Surface Water Quality Standards, TNRCC, Chapter 307.1 - 307.10, August 17, 2000. 15th percentile site-specific surface water hardness value of 28 mg/L (from all four watersheds) was used to adjust the criteria.

[i] Texas water quality criterion for sulfate in Caddo Lake.

Table 7-10
Sediment Direct Contact Assessment for Aquatic Life
Goose Prairie Creek

COPEC	95% UCL (mg/kg)	Mean (mg/kg)	Texas Ecological Benchmarks for Sediment[a]	ARCS[b]			SQB[b,c] (mg/kg)	Canadian ISQG[d] (mg/kg)	Canadian PEL[d] (mg/kg)	NOAA[b]		FDEP[e]		EPA Region 4 Ecological Benchmarks for Sediment[f] (mg/kg)	Weight of Evidence Exceedance	
				TEC (mg/kg)	PEC (mg/kg)	NEC (mg/kg)				ER-L (mg/kg)	ER-M (mg/kg)	TEC (mg/kg)	PEC (mg/kg)		Using UCL	Using Mean
2,3,7,8-TCDD TEQ	1.59E-06	1.00E-06	---	---	---	---	---	8.5E-07	2.15E-05	---	---	---	---	2.50E-06	1/3	1/3
4,4'-DDD	2.97E-03	2.56E-03	0.00488	---	---	---	0.11	0.00354	0.00851	0.002	0.02	0.00488	0.028	0.0033	1/9	1/9
4,4'-DDT	3.04E-03	2.61E-03	0.00416	---	---	---	0.34	0.00119	0.00477	0.001	0.007	0.00416	0.0629	0.0033	2/9	2/9
p-Cymene	5.71E-03	4.59E-03	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Aluminum	1.03E+04	8.98E+03	---	---	58,030	73,160	---	---	---	---	---	---	---	---	0/2	0/2
Aroclor 1254	5.10E-02	4.20E-02	0.060	---	---	---	0.81	0.06	0.34	0.0227	0.18	0.0598	0.676	---	1/8	1/8
Barium	1.34E+02	1.18E+02	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Cadmium	5.24E-01	4.84E-01	0.99	0.592	11.7	41.1	---	0.6	3.5	1.2	9.6	0.99	4.98	1	0/11	0/11
Carbon disulfide	9.88E-03	7.93E-03	---	---	---	---	0.00085	---	---	---	---	---	---	---	1/1	1/1
Copper	1.27E+01	1.08E+01	31.6	28	77.7	54.8	---	35.7	197	34	270	31.6	149	18.7	0/11	0/11
Dieldrin	3.00E-03	2.57E-03	0.0019	---	---	---	0.11	0.00285	0.00667	0.00002	0.008	0.0019	0.0618	0.0033	4/9	3/9
Lead	7.66E+01	5.97E+01	35.8	34.2	396	68.7	---	35	91.3	46.7	218	35.8	128	30.2	7/11	6/11
Mercury	2.65E-01	2.09E-01	0.18	---	---	---	---	0.17	0.486	0.15	0.71	0.18	1.06	0.13	5/8	5/8
Selenium	1.29E+00	1.10E+00	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Silver	2.66E+00	2.05E+00	1	---	---	---	---	---	---	1	3.7	---	---	2	3/4	3/4
Sulfates	6.05E+00	4.59E+00	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Thallium	7.02E-01	6.22E-01	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Vanadium	2.94E+01	2.65E+01	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Zinc	9.41E+01	7.78E+01	121	159	1,532	541	---	123	315	150	410	121	459	124	0/11	0/11

Notes:

ARCS, SQB, and Canadian values for freshwater environments.

NOAA and FDEP values for estuarine and marine environments, but may be used for screening purposes.

Tier 1 and Tier 2 measured sediment total organic carbon (TOC) at the site ranged from 12.7% to 22.4%.

[a] Values from Texas Natural Resources Conservation Commission (TRNCC). December 2005. Guidance for Conducting Ecological Risk Assessments at Remediation Sites in Texas, RG-263 (revised).

[b] Values from Jones, D.S and Suter, G.W. 1997. Toxicological Benchmarks for Screening Contaminants of Potential Concern for Effects on Sediment-Associated Biota: 1997 Revision. ES/ER/TM-95/R4.

[c] The lowest of the Eq P-derived sediment quality benchmarks presented in Jones, D.S and Suter, G.W. 1997. Toxicological Benchmarks for Screening Contaminants of Potential Concern for Effects on Sediment-Associated Biota: 1997 Revision, ES/ER/TM-95/R4, is presented here (assumed TOC of 1%).

[d] Values from Canadian Council of Ministers of the Environment (CCME). 2002. Canadian Environmental Quality Guidelines. Summary Table Update 2002.

[e] Values are from Florida DEP, 2003. Development and Evaluation of Numerical Sediment Quality Assessment Guidelines for Florida Inland Waters.

[f] EPA Region 4 Ecological Benchmark Screening Values for Sediment.

--- No Value Available
ARCS Assessment and Remediation of Contaminated Sediment
COPEC Chemical of Potential Ecological Concern
EPC Exposure Point Concentration. The 95% upper confidence limit concentration was selected as the EPC unless it exceeded the maximum detected concentration, in which case the MDC was chosen as the EPC.
ER-L Effect Range-Low
ER-M Effect Range Median
FDEP Florida Department of Environmental Protection
ISQG Interim Sediment Quality Guideline
MDC Maximum Detected Concentration
NEC High No Effect Concentration
NOAA National Oceanic and Atmospheric Administration
PEC Probable Effect Concentration
PEL Probably Effect Level
SQB Sediment Quality Benchmark
TEC Threshold Effect Concentration
TEL Threshold Effect Level

Table 7-11
Surface Water Direct Contact Assessment for Aquatic Life
Central Creek

COPEC	95% UCL (ug/L)	Mean (ug/L)	NAWQC[a] (ug/L)		Texas Surface Water Quality Criteria[b] (ug/L)		Texas Ecological Benchmarks for Water[c] (ug/L)	Tier II Secondary Values[d] (ug/L)		Lowest Chronic Values[d] (ug/L)				EPA Region 4 Ecological Benchmarks for Surface Water[e] Chronic (ug/L)	Weight of Evidence Exceedance		Promulgated Criteria Exceeded?
			Acute	Chronic	Acute	Chronic		Acute	Chronic	Fish	Daphnids	Non-Daphnids	Aquatic Plants		Using UCL	Using Mean	
2,3,7,8-TCDD TEQ	1.22E-05	1.07E-05	---	---	---	---	---	---	---	---	---	---	---	1.00E-05	1/1	1/1	---
Aluminum (dissolved)	1.96E+03	1.33E+03	---	---	991	---	---	---	---	---	---	---	---	---	8/8	8/8	Yes
Aluminum (total)	6.11E+03	4.16E+03	750[f]	87[f]	---	---	87	---	---	3,288	1,900	---	460	87			
Barium	1.40E+02	1.24E+02	---	---	---	---	4	110	4	---	---	---	---	---	3/3	3/3	---
Cadmium (dissolved)	6.22E-01	5.21E-01	1.0[g]	0.2[g]	7.8[h]	0.38[h]	0.6	---	---	---	---	---	---	---	7/9	6/9	Yes
Cadmium (total)	2.49E+00	2.09E+00	---	---	---	---	---	---	---	1.7	0.15	---	2	0.66			
Copper (dissolved)	4.01E+00	3.17E+00	7.0[g]	5.0[g]	5.55[h]	4.14[h]	7	---	---	---	---	---	---	---	5/10	5/10	No
Copper (total)	1.18E+01	9.31E+00	---	---	---	---	---	---	---	3.8	0.23	6.066	1	6.54			
Iron	5.98E+03	4.18E+03	---	1,000	---	---	1,000	---	---	1,300	158	---	---	1,000	5/5	5/5	Yes
Lead (dissolved)	9.32E-01	7.36E-01	30.1[g]	1.2[g]	14.4[h]	0.49[h]	1	---	---	---	---	---	---	---	2/10	2/10	Yes
Lead (total)	5.18E+00	4.09E+00	---	---	---	---	---	---	---	18.88	12.26	25.46	500	1.32			
Manganese	4.54E+02	3.17E+02	---	---	---	---	120	2,300	120	1,780	<1,100	---	---	---	2/5	2/5	---
Nitrate	8.67E+02	4.79E+02	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Nitrate/Nitrite	7.06E+01	5.55E+01	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sulfates	6.09E+03	5.14E+03	---	---	50,000[i]		---	---	---	---	---	---	---	---	0/1	0/1	No
Vanadium	3.33E+01	2.64E+01	---	---	---	---	20	280	20	80	1,900	---	---	---	2/5	2/5	---

Notes:

Dissolved metal concentrations were adjusted for total water concentrations using the following information:
(From Table 7 in TCEQ, 2003, *Procedures to Implement the Texas Surface Water Quality Standards* [RG-194], January)

--- No Value Available

COPEC Constituent of potential ecological concern

EPC Exposure Point Concentration. The 95% UCL was selected as the EPC unless it exceeded the maximum detected concentration, in which case the MDC was chosen as the EPC.

MDC Maximum detected concentration

NAWQC National Ambient Water Quality Criteria

95% UCL 95% upper confidence limit concentration

Table 7-11
Surface Water Direct Contact Assessment for Aquatic Life
Central Creek

Metal	Stream Intercept (b)	Stream Slope (m)	TSS (mg/L)	Estimated Kp	Cd/Ct	
Arsenic	5.68	-0.73	10	8.91E+04	0.53	
Cadmium	6.6	-1.13	10	2.95E+05	0.25	
Chromium	6.52	-0.93	10	3.89E+05	0.20	
Copper	6.02	-0.74	10	1.91E+05	0.34	
Lead	6.45	-0.8	10	4.47E+05	0.18	
Mercury	6.46	-1.14	10	2.09E+05	0.32	
Nickel	5.69	-0.57	10	1.32E+05	0.43	
Silver	6.38	-1.03	10	2.24E+05	0.31	
Zinc	6.1	-0.7	10	2.51E+05	0.28	
					0.32	= Arithmetic mean

Total suspended solids (TSS) estimate from USEPA, 1999

$Kp = 10^b \times TSS^m$, with slope and intercept values b and m from Table 7 in TCEQ (2003).

Dissolved Conc (C_d)/Total Conc (C_t) = (1+(Kp*TSS*1E-6))

The arithmetic mean of C_d/C_t was used for inorganic chemicals not included in the above table.

[a] Values from EPA, 2002, National Recommended Water Quality Criteria: 2002. EPA 822-R-02-047.

[b] Values from Texas Surface Water Quality Standards, Texas Natural Resource Conservation Commission (TNRCC), Chapter 307.1 - 307.10, August 17, 2000.

[c] Values from Texas Natural Resources Conservation Commission (TNRCC). December 2001. Guidance for Conducting Ecological Risk Assessments at Remediation Sites in Texas, RG-263 (revised).

[d] Unless otherwise noted, values from Suter, G.W., and Tsao, C.L. 1996. Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Aquatic Biota: 1996 Revision. ES/ER/TM-96/R2.

[e] EPA Region 4 Ecological Benchmark Screening Values for Surface Water.

[f] Aluminum pH of 6.5-9.0

[g] Criteria were adjusted for hardness following the equations presented in EPA 2002. National Recommended Water Quality Criteria-Correction. EPA 822-R-02-047. Surface water hardness measured at the site ranges from 4 to 120 mg/L and averages 50 mg/L. Average on-site hardness was used to adjust the criteria.

[h] Criteria were adjusted for hardness following the equations presented in Texas Surface Water Quality Standards, TNRCC, Chapter 307.1 - 307.10, August 17, 2000. 15th percentile site-specific surface water hardness value of 28 mg/L (from all four watersheds) was used to adjust the criteria.

[I] Texas water quality criterion for sulfate in Caddo Lake.

Table 7-12
Sediment Direct Contact Assessment for Aquatic Life
Central Creek

COPEC	95% UCL (mg/kg)	Mean (mg/kg)	Texas Ecological Benchmarks for Sediment[a]	ARCS[b]			SQB [b,c] (mg/kg)	Canadian ISQG[d] (mg/kg)	Canadian PEL[d] (mg/kg)	NOAA[b]		FDEP[e]		EPA Region 4 Ecological Benchmarks for Sediment[f] (mg/kg)	Weight of Evidence Exceedance	
				TEC (mg/kg)	PEC (mg/kg)	NEC (mg/kg)				ER-L (mg/kg)	ER-M (mg/kg)	TEC (mg/kg)	PEC (mg/kg)		Using UCL	Using Mean
2,3,7,8-TCDD TEQ	8.26E-06	6.00E-06	---	---	---	---	---	8.5E-07	2.15E-05	---	---	---	---	2.50E-06	2/3	2/3
Aluminum	9.69E+03	8.09E+03	---	---	58,030	73,160	---	---	---	---	---	---	---	---	0/2	0/2
Barium	1.32E+02	1.18E+02	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Cadmium	5.48E-01	4.57E-01	0.99	0.592	11.7	41.1	---	0.6	3.5	1.2	9.6	0.99	4.98	1	0/11	0/11
Carbon disulfide	1.22E-02	9.48E-03	---	---	---	---	0.00085	---	---	---	---	---	---	---	1/1	1/1
Copper	7.20E+00	6.17E+00	31.6	28	77.7	54.8	---	35.7	197	34	270	31.6	149	18.7	0/11	0/11
p-Cymene	1.38E-02	8.80E-03	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Isobutanol	6.10E-02	6.10E-02	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Isopropylbenzene	5.24E-03	4.20E-03	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Mercury	9.58E-02	8.35E-02	0.18	---	---	---	---	0.17	0.486	0.15	0.71	0.18	1.06	0.13	0/8	0/8
Nickel	9.33E+00	8.12E+00	22.7	39.6	38.5	37.9	---	---	---	20.9	51.6	22.7	48.6	15.9	0/9	0/9
Nitrate (as N)	1.30E-01	9.50E-02	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Selenium	8.67E-01	7.51E-01	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sulfates	2.00E+01	1.39E+01	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Thallium	7.12E-01	6.14E-01	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Vanadium	2.08E+01	1.81E+01	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Zinc	3.82E+01	3.22E+01	121	159	1,532	541	---	123	315	150	410	121	459	124	0/11	0/11

Notes:

ARCS, SQB, and Canadian values for freshwater environments.

NOAA and FDEP values for estuarine and marine environments, but may be used for screening purposes.

Tier 1 and Tier 2 measured sediment total organic carbon (TOC) at the site ranged from 4.0% to 6.1%.

[a] Values from Texas Natural Resources Conservation Commission (TRNCC). December 2005. Guidance for Conducting Ecological Risk Assessments at Remediation Sites in Texas, RG-263 (revised).

[b] Values from Jones, D.S and Suter, G.W. 1997. Toxicological Benchmarks for Screening Contaminants of Potential Concern for Effects on Sediment-Associated Biota: 1997 Revision ES/ER/TM-95/R4.

[c] The lowest of the Eq P-derived sediment quality benchmarks presented in Jones, D.S and Suter, G.W. 1997. Toxicological Benchmarks for Screening Contaminants of Potential Concern for Effects on Sediment-Associated Biota: 1997 Revision. ES/ER/TM-95/R4. is presented here (assumed TOC of 1%).

[d] Values from Canadian Council of Ministers of the Environment (CCME). 2002. Canadian Environmental Quality Guidelines. Summary Table Update 2002

[e] Values are from Florida DEP, 2003. Development and Evaluation of Numerical Sediment Quality Assessment Guidelines for Florida Inland Waters.

[f] EPA Region 4 Ecological Benchmark Screening Values for Sediment.

--- No Value Available

ARCS Assessment and Remediation of Contaminated Sediment
COPEC Chemical of Potential Ecological Concern
EPC Exposure Point Concentration. The 95% upper confidence limit concentration was selected as the EPC unless it exceeded the maximum detected concentration, in which case the MDC was chosen as the EPC.
ER-L Effect Range-Low
ER-M Effect Range Median
FDEP Florida Department of Environmental Protection
ISQG Interim Sediment Quality Guideline
MDC Maximum Detected Concentration
NEC High No Effect Concentration
NOAA National Oceanic and Atmospheric Administration
PEC Probable Effect Concentration
PEL Probably Effect Level
SQB Sediment Quality Benchmark
TEC Threshold Effect Concentration
TEL Threshold Effect Level

Table 7-13
Surface Water Direct Contact Assessment for Aquatic Life
Saunders Branch

COPEC	95% UCL (ug/L)	Mean (ug/L)	NAWQC[a] (ug/L)		Texas Surface Water Quality Criteria[b] (ug/L)		Texas Ecological Benchmarks for Water[c] (ug/L)	Tier II Secondary Values[d] (ug/L)		Lowest Chronic Values[d] (ug/L)				EPA Region 4 Ecological Benchmarks for Surface Water[e] Chronic (ug/L)	Weight of Evidence Exceedence		Promulgated Criteria Exceeded?
			Acute	Chronic	Acute	Chronic		Acute	Chronic	Fish	Daphnids	Non-Daphnids	Aquatic Plants		Using UCL	Using Mean	
Barium	2.61E+02	1.84E+02	---	---	---	---	4	110	4	---	---	---	---	---	3/3	3/3	---
Lead (dissolved)	5.40E-01	3.60E-01	6.6[g]	0.3[g]	14.4[h]	0.49[h]	1	---	---	---	---	---	---	---	2/10	2/10	Yes
Lead (total)	3.00E+00	2.00E+00	---	---	---	---	---	---	---	18.88	12.26	25.46	500	1.32			
Nitrate	9.00E+01	3.25E+01	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sulfates	5.00E+03	2.88E+03	---	---	50,000[i]		---	---	---	---	---	---	---	---	0/1	0/1	No

Notes:

Dissolved metal concentrations were adjusted for total water concentrations using the following information:
(From Table 7 in TCEQ, 2003, *Procedures to Implement the Texas Surface Water Quality Standards* [RG-194], January)

--- No Value Available
COPEC Chemical of potential ecological concern
EPC Exposure Point Concentration. The 95% UCL was selected as the EPC unless it exceeded the maximum detected concentration, in which case the MDC was chosen as the EPC.
MDC Maximum detected concentration
NAWQC National Ambient Water Quality Criteria
95% UCL 95% upper confidence limit concentration

Table 7-13
Surface Water Direct Contact Assessment for Aquatic Life
Saunders Branch

Metal	Stream Intercept (b)	Stream Slope (m)	TSS (mg/L)	Estimated Kp	Cd/Ct	
Arsenic	5.68	-0.73	10	8.91E+04	0.53	
Cadmium	6.6	-1.13	10	2.95E+05	0.25	
Chromium	6.52	-0.93	10	3.89E+05	0.20	
Copper	6.02	-0.74	10	1.91E+05	0.34	
Lead	6.45	-0.8	10	4.47E+05	0.18	
Mercury	6.46	-1.14	10	2.09E+05	0.32	
Nickel	5.69	-0.57	10	1.32E+05	0.43	
Silver	6.38	-1.03	10	2.24E+05	0.31	
Zinc	6.1	-0.7	10	2.51E+05	0.28	
					0.32	= Arithmetic mean

Total suspended solids (TSS) estimate from USEPA, 1999

$Kp = 10^b \times TSS^m$, with slope and intercept values b and m from Table 7 in TCEQ (2003).

Dissolved Conc (C_d)/Total Conc (C_t) = (1+(Kp*TSS*1E-6))

The arithmetic mean of C_d/C_t was used for inorganic chemicals not included in the above table.

[a] Values from EPA, 2002, National Recommended Water Quality Criteria: 2002. EPA 822-R-02-047.

[b] Values from Texas Surface Water Quality Standards, Texas Natural Resource Conservation Commission (TNRCC), Chapter 307.1 - 307.10, August 17, 2000.

[c] Values from Texas Natural Resources Conservation Commission (TNRCC). December 2001. Guidance for Conducting Ecological Risk Assessments at Remediation Sites in Texas, RG-263 (revised).

[d] Unless otherwise noted, values from Suter, G.W., and Tsao, C.L. 1996. Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Aquatic Biota: 1996 Revision. ES/ER/TM-96/R2.

[e] EPA Region 4 Ecological Benchmark Screening Values for Surface Water.

[f] Aluminum pH of 6.5-9.0

[g] Criteria were adjusted for hardness following the equations presented in EPA, 2002, National Recommended Water Quality Criteria-Correction. EPA 822-R-02-047. Surface water hardness measured at the site ranges from 1 to 32 mg/L and averages 13 mg/L. Average on-site hardness was used to adjust the criteria.

[h] Criteria were adjusted for hardness following the equations presented in Texas Surface Water Quality Standards, TNRCC, Chapter 307.1 - 307.10, August 17, 2000. 15th percentile site-specific surface water hardness value of 28 mg/L (from all four watersheds) was used to adjust the criteria.

[i] Texas water quality criterion for sulfate in Caddo Lake.

Table 7-14
Sediment Direct Contact Assessment for Aquatic Life
Saunders Branch

COPEC	95% UCL (mg/kg)	Mean (mg/kg)	Texas Ecological Benchmarks for Sediment[a]	ARCS[b]			SQB [b,c] (mg/kg)	Canadian ISQG[d] (mg/kg)	Canadian PEL[d] (mg/kg)	NOAA[b]		FDEP[e]		EPA Region 4 Ecological Benchmarks for Sediment[f] (mg/kg)	Weight of Evidence Exceedence	
				TEC (mg/kg)	PEC (mg/kg)	NEC (mg/kg)				ER-L (mg/kg)	ER-M (mg/kg)	TEC (mg/kg)	PEC (mg/kg)		Using UCL	Using Mean
2,3,7,8-TCDD TEQ	6.98E-06	6.98E-06	---	---	---	---	---	8.5E-07	2.15E-05	---	---	---	---	2.50E-06	2/3	2/3
Aluminum	1.63E+04	1.18E+04	---	---	58,030	73,160	---	---	---	---	---	---	---	---	0/2	0/2
Barium	1.60E+02	1.24E+02	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Bis(2-ethylhexyl) phthalate	3.06E-01	2.27E-01	---	---	---	---	890	---	---	---	---	---	---	0.182	1/2	1/2
Cadmium	2.14E-01	1.62E-01	0.99	0.592	11.7	41.1	---	0.6	3.5	1.2	9.6	0.99	4.98	1	0/11	0/11
Chloride	3.97E+01	2.55E+01	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Copper	1.07E+01	8.76E+00	31.6	28	77.7	54.8	---	35.7	197	34	270	31.6	149	18.7	0/11	0/11
Manganese	4.88E+02	3.46E+02	460	1,673	1,081	819	---	---	---	---	---	---	---	---	1/4	0/4
Mercury	8.01E-02	5.78E-02	0.18	---	---	---	---	0.17	0.486	0.15	0.71	0.18	1.06	0.13	0/8	0/8
Nickel	1.10E+01	8.62E+00	22.7	39.6	38.5	37.9	---	---	---	20.9	51.6	22.7	48.6	15.9	0/9	0/9
Nitrate	9.88E-01	5.95E-01	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Selenium	8.74E-01	6.32E-01	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sulfates	3.00E+01	2.58E+01	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Vanadium	3.08E+01	2.60E+01	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Zinc	5.15E+01	4.30E+01	121	159	1,532	541	---	123	315	150	410	121	459	124	0/11	0/11

Notes:

ARCS, SQB, and Canadian values for freshwater environments.

NOAA and FDEP values for estuarine and marine environments, but may be used for screening purposes.

Tier 1 and Tier 2 measured sediment total organic carbon (TOC) at the site ranged from 5.1% to 6.2%.

[a] Values from Texas Natural Resources Conservation Commission (TRNCC). December 2005. Guidance for Conducting Ecological Risk Assessments at Remediation Sites in Texas, RG-263 (revised).

[b] Values from Jones, D.S and Suter, G.W. 1997. Toxicological Benchmarks for Screening Contaminants of Potential Concern for Effects on Sediment-Associated Biota: 1997 Revision ES/ER/TM-95/R4.

[c] The lowest of the Eq P-derived sediment quality benchmarks presented in Jones, D.S and Suter, G.W. 1997. Toxicological Benchmarks for Screening Contaminants of Potential Concern for Effects on Sediment-Associated Biota: 1997 Revision, ES/ER/TM-95/R4, is presented here (assumed TOC of 1%).

[d] Values from Canadian Council of Ministers of the Environment (CCME). 2002. Canadian Environmental Quality Guidelines. Summary Table Update 2002

[e] Values are from Florida DEP, 2003. Development and Evaluation of Numerical Sediment Quality Assessment Guidelines for Florida Inland Waters.

[f] EPA Region 4 Ecological Benchmark Screening Values for Sediment.

--- No Value Available

ARCS Assessment and Remediation of Contaminated Sediment

COPEC Chemical of Potential Ecological Concern

EPC Exposure Point Concentration. The 95% upper confidence limit concentration was selected as the EPC unless it exceeded the maximum detected concentration, in which case the MDC was chosen as the EPC.

ER-L Effect Range-Low

ER-M Effect Range Median

FDEP Florida Department of Environmental Protection

ISQG Interim Sediment Quality Guideline

MDC Maximum Detected Concentration

NEC High No Effect Concentration

NOAA National Oceanic and Atmospheric Administration

PEC Probable Effect Concentration

PEL Probably Effect Level

SQB Sediment Quality Benchmark

TEC Threshold Effect Concentration

TEL Threshold Effect Level

Table 7-15
Summary of Aquatic Assessment - Direct Contact with Surface Water and Sediment COPECs and Hazard Quotients for Estimated Critical Body Residues for Fish

COPEC [a]	Tier 1 Approach					
	Minnow Hazard Quotient (from Surface Water COPEC)		Surface Water Direct Contact Assessment (No. of Benchmarks Exceeded)	Catfish Hazard Quotient (from Sediment COPEC)		Sediment Direct Contact Assessment (No. of Benchmarks Exceeded)
	NOAEL-Based	LOAEL-Based		NOAEL-Based	LOAEL-Based	
Central Creek Watershed						
Aluminum	0.41	0.26	8/8	0.44	0.28	0/2
Barium	NVA	NVA	3/3	NVA	NVA	NVA
Cadmium	16.2	8.1	7/9	22.0	11.0	0/11
Chromium	NVA	NVA		NVA	NVA	
Copper	3.6	3.1	5/10	2.0	1.8	0/11
Iron	NVA	NVA	5/5	NVA	NVA	NVA
Lead	0.61	0.39	2/10	NVA	NVA	NVA
Manganese	NVA	NVA	2/5	NVA	NVA	NVA
Mercury	NVA	NVA	NVA	0.66	0.41	0/8
Nickel	NVA	NVA	NVA	18.3	1.8	0/9
Selenium	NVA	NVA	NVA	0.11	0.091	NVA
Silver	NVA	NVA		NVA	NVA	
Strontium	NVA	NVA		NVA	NVA	
Thallium	NVA	NVA	NVA	0.56	NVA	NVA
Vanadium	12.5	3.2	2/5	NVA	NVA	NVA
Zinc	NVA	NVA	NVA	3.6	3.1	0/11
2,3,7,8-TCDD TEQ	3.3	1.8	1/1	0.60	0.33	2/3
4,4'-DDD	NVA	NVA		NVA	NVA	
4,4'-DDT	NVA	NVA		NVA	NVA	
Aroclor-1254	NVA	NVA		NVA	NVA	
Bis(2-ethylhexyl)phthalate	NVA	NVA		NVA	NVA	
Carbon disulfide	NVA	NVA		NVA	NVA	1.1
Chloride	NVA	NVA		NVA	NVA	
Dieldrin	NVA	NVA		NVA	NVA	
Isobutanol	NVA	NVA	NVA	NVA	NVA	NVA
Isopropylbenzene	NVA	NVA	NVA	NVA	NVA	NVA
Nitrate	NVA	NVA	NVA	NVA	NVA	NVA
Nitrate/Nitrite	NVA	NVA	NVA	NVA	NVA	NVA
p-Isopropyltoluene (p-cymene)	NVA	NVA	NVA	NVA	NVA	NVA
Sulfate	NVA	NVA	0/1	NVA	NVA	NVA

Table 7-15
Summary of Aquatic Assessment - Direct Contact with Surface Water and Sediment COPECs and Hazard Quotients for Estimated Critical Body Residues for Fish

COPEC [a]	Tier 1 Approach					
	Minnow Hazard Quotient (from Surface Water COPEC)		Surface Water Direct Contact Assessment (No. of Benchmarks Exceeded)	Catfish Hazard Quotient (from Sediment COPEC)		Sediment Direct Contact Assessment (No. of Benchmarks Exceeded)
	NOAEL-Based	LOAEL-Based		NOAEL-Based	LOAEL-Based	
Harrison Bayou Watershed						
Aluminum	1.4	0.87	8/8	0.47	0.30	0/2
Barium	NVA	NVA	3/3	NVA	NVA	NVA
Cadmium	NVA	NVA	NVA	5.7	2.9	0/11
Chromium	1.1	0.29	3/9	NVA	NVA	NVA
Copper	5.1	4.5	7/10	2.2	1.9	0/11
Iron	NVA	NVA	5/5	NVA	NVA	NVA
Lead	0.86	0.54	3/10	NVA	NVA	NVA
Manganese	NVA	NVA	2/5	NVA	NVA	NVA
Mercury	NVA	NVA	NVA	0.59	0.36	0/8
Nickel	NVA	NVA	NVA	21.6	2.2	0/9
Selenium	0.17	0.15	0/8	0.11	0.095	NVA
Silver	NVA	NVA		NVA	NVA	
Strontium	NVA	NVA		NVA	NVA	
Thallium	0.9	NVA	0/7	0.47	NVA	NVA
Vanadium	23.2	5.9	2/5	NVA	NVA	NVA
Zinc	NVA	NVA	NVA	3.3	2.9	0/11
2,3,7,8-TCDD TEQ	2.6	1.4	0/1	0.56	0.30	2/3
4,4'-DDD	NVA	NVA		NVA	NVA	
4,4'-DDT	NVA	NVA		NVA	NVA	
Aroclor-1254	NVA	NVA		NVA	NVA	
Bis(2-ethylhexyl)phthalate	NVA	NVA	NVA	0.51	NVA	1/2
Chloride	NVA	NVA		NVA	NVA	
Dieldrin	NVA	NVA		NVA	NVA	
Isobutanol	NVA	NVA		NVA	NVA	
Isopropylbenzene	NVA	NVA		NVA	NVA	
Nitrate	NVA	NVA	NVA	NVA	NVA	NVA
Nitrate/Nitrite	NVA	NVA	NVA	NVA	NVA	NVA
p-Isopropyltoluene (p-cymene)	NVA	NVA		NVA	NVA	
Sulfate	NVA	NVA	1/1 (see Table 7-7 footnote "j")	NVA	NVA	NVA

Table 7-15
Summary of Aquatic Assessment - Direct Contact with Surface Water and Sediment COPECs and Hazard Quotients for Estimated Critical Body Residues for Fish

COPEC [a]	Tier 1 Approach					
	Minnow Hazard Quotient (from Surface Water COPEC)		Surface Water Direct Contact Assessment (No. of Benchmarks Exceeded)	Catfish Hazard Quotient (from Sediment COPEC)		Sediment Direct Contact Assessment (No. of Benchmarks Exceeded)
	NOAEL-Based	LOAEL-Based		NOAEL-Based	LOAEL-Based	
Goose Prairie Creek Watershed						
Aluminum	0.14	0.090	6/8	0.47	0.30	0/2
Barium	NVA	NVA	3/3	NVA	NVA	NVA
Cadmium	NVA	NVA	NVA	21.0	10.5	0/11
Chromium	NVA	NVA		NVA	NVA	
Copper	4.3	3.7	10/10	3.6	3.1	0/11
Iron	NVA	NVA	5/5	NVA	NVA	NVA
Lead	0.92	0.58	4/10	4.2	2.7	7/11
Manganese	NVA	NVA	2/5	NVA	NVA	NVA
Mercury	NVA	NVA	NVA	1.9	1.1	5/8
Nickel	NVA	NVA	NVA	NVA	NVA	NVA
Selenium	0.14	0.12	0/8	0.16	0.13	NVA
Silver	NVA	NVA	NVA	39.8	10.0	3/4
Strontium	NVA	NVA		NVA	NVA	
Thallium	1.4	NVA	0/7	0.1	NVA	NVA
Vanadium	NVA	NVA	NVA	NVA	NVA	NVA
Zinc	4.5	3.9	4/10	8.8	7.5	0/11
2,3,7,8-TCDD TEQ	2.3	1.3	0/1	0.037	0.020	1/3
4,4'-DDD	NVA	NVA	NVA	0.00013	0.00012	1/9
4,4'-DDT	NVA	NVA	NVA	0.00029	0.00028	2/9
Aroclor-1254	NVA	NVA	NVA	0.19	0.095	1/8
Bis(2-ethylhexyl)phthalate	11.4	NVA	3/5	NVA	NVA	NVA
Carbon disulfide	NVA	NVA		NVA	NVA	1/1
Chloride	NVA	NVA		NVA	NVA	
Dieldrin	NVA	NVA	NVA	0.011	0.00066	4/9
Isobutanol	NVA	NVA		NVA	NVA	
Isopropylbenzene	NVA	NVA		NVA	NVA	
Nitrate	NVA	NVA	NVA	NVA	NVA	NVA
Nitrate/Nitrite	NVA	NVA	NVA	NVA	NVA	NVA
p-Isopropyltoluene (p-cymene)	NVA	NVA	NVA	NVA	NVA	NVA
Sulfate	NVA	NVA	0/1	NVA	NVA	NVA

Table 7-15
Summary of Aquatic Assessment - Direct Contact with Surface Water and Sediment COPECs and Hazard Quotients for Estimated Critical Body Residues for Fish

COPEC [a]	Tier 1 Approach					
	Minnow Hazard Quotient (from Surface Water COPEC)		Surface Water Direct Contact Assessment (No. of Benchmarks Exceeded)	Catfish Hazard Quotient (from Sediment COPEC)		Sediment Direct Contact Assessment (No. of Benchmarks Exceeded)
	NOAEL-Based	LOAEL-Based		NOAEL-Based	LOAEL-Based	
Saunders Branch Watershed						
Aluminum	NVA	NVA	NVA	0.74	0.47	0/2
Barium	NVA	NVA	3/3	NVA	NVA	NVA
Cadmium	NVA	NVA	NVA	8.6	4.3	0/11
Chromium	NVA	NVA		NVA	NVA	
Copper	NVA	NVA	NVA	3.0	2.6	0/11
Iron	NVA	NVA		NVA	NVA	
Lead	0.35	0.23	2/10	NVA	NVA	NVA
Manganese	NVA	NVA	NVA	NVA	NVA	1/4
Mercury	NVA	NVA	NVA	0.55	0.34	0/8
Nickel	NVA	NVA	NVA	19.8	2.0	0/9
Selenium	NVA	NVA	NVA	0.11	0.092	NVA
Silver	NVA	NVA		NVA	NVA	
Strontium	NVA	NVA		NVA	NVA	
Thallium	NVA	NVA		NVA	NVA	
Vanadium	NVA	NVA	NVA	11.6	3.0	NVA
Zinc	NVA	NVA	NVA	4.8	4.1	0/11
2,3,7,8-TCDD TEQ	NVA	NVA	NVA	0.40	0.22	2/3
4,4'-DDD	NVA	NVA		NVA	NVA	
4,4'-DDT	NVA	NVA		NVA	NVA	
Aroclor-1254	NVA	NVA		NVA	NVA	
Bis(2-ethylhexyl)phthalate	NVA	NVA	NVA	0.80	NVA	1/2
Chloride	NVA	NVA	NVA	NVA	NVA	NVA
Dieldrin	NVA	NVA		NVA	NVA	
Isobutanol	NVA	NVA		NVA	NVA	
Isopropylbenzene	NVA	NVA		NVA	NVA	
Nitrate	NVA	NVA	NVA	NVA	NVA	NVA
Nitrate/Nitrite	NVA	NVA		NVA	NVA	
p-Isopropyltoluene (p-cymene)	NVA	NVA		NVA	NVA	
Sulfate	NVA	NVA	0/1	NVA	NVA	NVA

Table 7-15
Summary of Aquatic Assessment - Direct Contact with Surface Water and Sediment COPECs and Hazard Quotients for Estimated Critical Body Residues for Fish

COPEC [a]	Tier 2 Approach					
	Minnow Hazard Quotient (from Surface Water COPEC)		Surface Water Direct Contact Assessment (No. of Benchmarks Exceeded)	Catfish Hazard Quotient (from Sediment COPEC)		Sediment Direct Contact Assessment (No. of Benchmarks Exceeded)
	NOAEL-Based	LOAEL-Based		NOAEL-Based	LOAEL-Based	
Central Creek Watershed						
Aluminum	0.28	0.18	8/8	0.37	0.24	0/2
Barium	NVA	NVA	3/3	NVA	NVA	NVA
Cadmium	9.6	4.8	6/9	1.4	0.68	0/11
Chromium	NVA	NVA		NVA	NVA	
Copper	0.53	0.46	5/10	0.52	0.45	0/11
Iron	NVA	NVA	5/5	NVA	NVA	NVA
Lead	0.14	0.092	2/10	NVA	NVA	NVA
Manganese	NVA	NVA	2/5	NVA	NVA	NVA
Mercury	NVA	NVA	NVA	0.23	0.14	0/8
Nickel	NVA	NVA	NVA	3.3	0.33	0/9
Selenium	NVA	NVA	NVA	0.093	0.078	NVA
Silver	NVA	NVA		NVA	NVA	
Strontium	NVA	NVA		NVA	NVA	
Thallium	NVA	NVA	NVA	0.0023	NVA	NVA
Vanadium	2.8	0.72	2/5	NVA	NVA	NVA
Zinc	NVA	NVA	NVA	0.78	0.66	0/11
2,3,7,8-TCDD TEQ	0.40	0.21	1/1	0.062	0.033	2/3
4,4'-DDD	NVA	NVA		NVA	NVA	
4,4'-DDT	NVA	NVA		NVA	NVA	
Aroclor-1254	NVA	NVA		NVA	NVA	
Bis(2-ethylhexyl)phthalate	NVA	NVA		NVA	NVA	
Carbon disulfide	NVA	NVA		NVA	NVA	1/1
Chloride	NVA	NVA		NVA	NVA	
Dieldrin	NVA	NVA		NVA	NVA	
Isobutanol	NVA	NVA	NVA	NVA	NVA	NVA
Isopropylbenzene	NVA	NVA	NVA	NVA	NVA	NVA
Nitrate	NVA	NVA	NVA	NVA	NVA	NVA
Nitrate/Nitrite	NVA	NVA	NVA	NVA	NVA	NVA
p-Isopropyltoluene (p-cymene)	NVA	NVA	NVA	NVA	NVA	NVA
Sulfate	NVA	NVA	0/1	NVA	NVA	NVA

Table 7-15
Summary of Aquatic Assessment - Direct Contact with Surface Water and Sediment COPECs and Hazard Quotients for Estimated Critical Body Residues for Fish

COPEC [a]	Tier 2 Approach					
	Minnow Hazard Quotient (from Surface Water COPEC)		Surface Water Direct Contact Assessment (No. of Benchmarks Exceeded)	Catfish Hazard Quotient (from Sediment COPEC)		Sediment Direct Contact Assessment (No. of Benchmarks Exceeded)
	NOAEL-Based	LOAEL-Based		NOAEL-Based	LOAEL-Based	
Harrison Bayou Watershed						
Aluminum	0.75	0.48	8/8	0.34	0.22	0/2
Barium	NVA	NVA	3/3	NVA	NVA	NVA
Cadmium	NVA	NVA	NVA	0.55	0.28	0/11
Chromium	0.31	0.080	2/9	NVA	NVA	NVA
Copper	0.67	0.59	5/10	0.57	0.50	0/11
Iron	NVA	NVA	5/5	NVA	NVA	NVA
Lead	0.20	0.13	3/10	NVA	NVA	NVA
Manganese	NVA	NVA	2/5	NVA	NVA	NVA
Mercury	NVA	NVA	NVA	0.17	0.11	0/8
Nickel	NVA	NVA	NVA	4.0	0.40	0/9
Selenium	0.15	0.12	0/8	0.095	0.080	NVA
Silver	NVA	NVA		NVA	NVA	
Strontium	NVA	NVA		NVA	NVA	
Thallium	0.0032	NVA	0/7	0.0018	NVA	NVA
Vanadium	4.5	1.2	2/5	NVA	NVA	NVA
Zinc	NVA	NVA	NVA	0.76	0.65	0/11
2,3,7,8-TCDD TEQ	0.30	0.16	0/1	0.022	0.012	2/3
4,4'-DDD	NVA	NVA		NVA	NVA	
4,4'-DDT	NVA	NVA		NVA	NVA	
Aroclor-1254	NVA	NVA		NVA	NVA	
Bis(2-ethylhexyl)phthalate	NVA	NVA	NVA	0.057	NVA	1/2
Chloride	NVA	NVA		NVA	NVA	
Dieldrin	NVA	NVA		NVA	NVA	
Isobutanol	NVA	NVA		NVA	NVA	
Isopropylbenzene	NVA	NVA		NVA	NVA	
Nitrate	NVA	NVA	NVA	NVA	NVA	NVA
Nitrate/Nitrite	NVA	NVA	NVA	NVA	NVA	NVA
p-Isopropyltoluene (p-cymene)	NVA	NVA		NVA	NVA	
Sulfate	NVA	NVA	0/1	NVA	NVA	NVA

Table 7-15
Summary of Aquatic Assessment - Direct Contact with Surface Water and Sediment COPECs and Hazard Quotients for Estimated Critical Body Residues for Fish

COPEC [a]	Tier 2 Approach: Minnow Hazard Quotient (from Surface Water COPEC) NOAEL-Based	Minnow Hazard Quotient LOAEL-Based	Surface Water Direct Contact Assessment (No. of Benchmarks Exceeded)	Catfish Hazard Quotient (from Sediment COPEC) NOAEL-Based	Catfish Hazard Quotient LOAEL-Based	Sediment Direct Contact Assessment (No. of Benchmarks Exceeded)
Goose Prairie Creek Watershed						
Aluminum	0.12	0.074	5/8	0.41	0.26	0/2
Barium	NVA	NVA	3/3	NVA	NVA	NVA
Cadmium	NVA	NVA	NVA	1.5	0.73	0/11
Chromium	NVA	NVA		NVA	NVA	
Copper	0.70	0.61	7/10	0.90	0.79	0/11
Iron	NVA	NVA	5/5	NVA	NVA	NVA
Lead	0.22	0.14	4/10	0.38	0.24	6/11
Manganese	NVA	NVA	2/5	NVA	NVA	NVA
Mercury	NVA	NVA	NVA	0.59	0.36	5/8
Nickel	NVA	NVA	NVA	NVA	NVA	NVA
Selenium	0.12	0.10	0/8	0.14	0.11	NVA
Silver	NVA	NVA	NVA	30.8	7.7	3/4
Strontium	NVA	NVA		NVA	NVA	
Thallium	0.0055	NVA	0/7	0.0023	NVA	NVA
Vanadium	NVA	NVA	NVA	NVA	NVA	NVA
Zinc	2.0	1.7	4/10	1.9	1.6	0/11
2,3,7,8-TCDD TEQ	0.26	0.14	0/1	0.0028	0.0015	1/3
4,4'-DDD	NVA	NVA	NVA	0.000064	0.000061	1/9
4,4'-DDT	NVA	NVA	NVA	0.00014	0.00014	2/9
Aroclor-1254	NVA	NVA	NVA	0.019	0.0095	1/8
Bis(2-ethylhexyl)phthalate	3.1	NVA	3/5	NVA	NVA	NVA
Carbon disulfide	NVA	NVA		NVA	NVA	1/1
Chloride	NVA	NVA		NVA	NVA	
Dieldrin	NVA	NVA	NVA	0.0053	0.00032	3/9
Isobutanol	NVA	NVA		NVA	NVA	
Isopropylbenzene	NVA	NVA		NVA	NVA	
Nitrate	NVA	NVA	NVA	NVA	NVA	NVA
Nitrate/Nitrite	NVA	NVA	NVA	NVA	NVA	NVA
p-Isopropyltoluene (p-cymene)	NVA	NVA	NVA	NVA	NVA	NVA
Sulfate	NVA	NVA	0/1	NVA	NVA	NVA

Table 7-15
Summary of Aquatic Assessment - Direct Contact with Surface Water and Sediment COPECs and Hazard Quotients for Estimated Critical Body Residues for Fish

	Tier 2 Approach					
	Minnow Hazard Quotient (from Surface Water COPEC)		Surface Water Direct Contact Assessment (No. of Benchmarks Exceeded)	Catfish Hazard Quotient (from Sediment COPEC)		Sediment Direct Contact Assessment (No. of Benchmarks Exceeded)
COPEC [a]	NOAEL-Based	LOAEL-Based		NOAEL-Based	LOAEL-Based	
Saunders Branch Watershed						
Aluminum	NVA	NVA	NVA	0.54	0.34	0/2
Barium	NVA	NVA	3/3	NVA	NVA	NVA
Cadmium	NVA	NVA	NVA	0.49	0.24	0/11
Chromium	NVA	NVA		NVA	NVA	
Copper	NVA	NVA	NVA	0.73	0.64	0/11
Iron	NVA	NVA		NVA	NVA	
Lead	0.071	0.045	2/10	NVA	NVA	NVA
Manganese	NVA	NVA	NVA	NVA	NVA	0/4
Mercury	NVA	NVA	NVA	0.16	0.099	0/8
Nickel	NVA	NVA	NVA	3.6	0.35	0/9
Selenium	NVA	NVA	NVA	0.078	0.066	NVA
Silver	NVA	NVA		NVA	NVA	
Strontium	NVA	NVA		NVA	NVA	
Thallium	NVA	NVA		NVA	NVA	
Vanadium	NVA	NVA	NVA	2.7	0.70	NVA
Zinc	NVA	NVA	NVA	1.0	0.88	0/11
2,3,7,8-TCDD TEQ	NVA	NVA	NVA	0.071	0.038	2/3
4,4'-DDD	NVA	NVA		NVA	NVA	
4,4'-DDT	NVA	NVA		NVA	NVA	
Aroclor-1254	NVA	NVA		NVA	NVA	
Bis(2-ethylhexyl)phthalate	NVA	NVA	NVA	0.10	NVA	1/2
Chloride	NVA	NVA	NVA	NVA	NVA	NVA
Dieldrin	NVA	NVA		NVA	NVA	
Isobutanol	NVA	NVA		NVA	NVA	
Isopropylbenzene	NVA	NVA		NVA	NVA	
Nitrate	NVA	NVA	NVA	NVA	NVA	NVA
Nitrate/Nitrite	NVA	NVA		NVA	NVA	
p-Isopropyltoluene (p-cymene)	NVA	NVA		NVA	NVA	
Sulfate	NVA	NVA	0/1	NVA	NVA	NVA

Table 7-15
Summary of Aquatic Assessment - Direct Contact with Surface Water and Sediment COPECs and Hazard Quotients for Estimated Critical Body Residues for Fish

Notes:

[a] Constituents of Potential Ecological Concern (COPECs) identified based on results of screening assessment.

Tier 1 results based on exposure point concentrations (EPCs) represented by 95% upper confidence limits for surface water and sediment samples.

Tier 2 results based on EPCs represented by arithmetic average concentrations for surface water and sediment samples.

Fathead minnow concentrations estimated to result from bioaccumulation from surface water to fish tissue.

Catfish concentration estimated to result from bioaccumulation from sediment to fish tissue, using TrophicTrace model.

Fish hazard quotients modeled using upper-bound bioaccumulation factors (Tier 1) and average bioaccumulation factors and model parameters (Tier 2).

NVA - no value available, due to COPEC not selected for media, value not found in literature, or value not needed due to other critical values not available.

Hazard quotient values presented in **bold** are above the threshold level of concern of 1.

The number of benchmarks exceeded, presented in **bold**, suggest a weight of evidence for an adverse effect (i.e., a majority of the available benchmarks were exceeded).

For surface water, any COPEC that had a concentration that exceeded promulgated federal or state criteria is, by definition, predicted to be adversely affected, and is **bolded** in the Surface Water Direct Contact Assessment column.

Table 7-16
Summary of Surface Water and Sediment COPECs - For Direct Contact and Fish Body Residue Exposure Pathways

COPEC [a]	Tier 1 Approach								Tier 2 Approach							
	Central Creek WS		Harrison Bayou WS		Goose Prairie Ck. WS		Saunders Branch WS		Central Creek WS		Harrison Bayou WS		Goose Prairie Ck. WS		Saunders Branch WS	
	Surface Water	Sediment	Surface Water	Sediment	Surface Water	Sediment	Surface Water	Sediment	Surface Water	Sediment	Surface Water	Sediment	Surface Water	Sediment	Surface Water	Sediment
Aluminum	DC	O	DC, F	O	DC	O		O	DC	O	DC	O	DC	O		O
Barium	DC		DC		DC		DC		DC		DC		DC		DC	
Cadmium	DC, F	F		F		F		F	DC, F	F		O		F		O
Chromium			O								O					
Copper	DC, F	F	DC, F	F	DC, F	F		F	DC	O	DC	O	DC	O		O
Iron	DC		DC		DC				DC		DC		DC			
Lead	DC		DC		DC	DC, F	DC		DC		DC		DC	DC	DC	
Manganese	O		O		O			O	O		O		O			O
Mercury		O		O		DC, F		O		O		O		DC		O
Nickel		F		F				F		F		F				F
Selenium		O	O	O	O	O		O		O	O	O	O	O		O
Silver						DC, F								DC, F		
Thallium		O	O	O	F	O				O	O	O	O	O		
Vanadium	F		F					F	F		F					F
Zinc		F		F	F	F		F		O		O	F	F		O
2,3,7,8-TCDD TEQ	DC, F	DC	F	DC	F	O		DC	DC	DC	O	DC	O	O		DC
4,4'-DDD						O								O		
4,4'-DDT						O								O		
Aroclor-1254						O								O		
Bis(2-ethylhexyl)phthalate				DC	DC, F			DC				DC	DC, F			DC
Chloride																
Carbon disulfide		DC				DC				DC				DC		
Dieldrin						O								O		
Isobutanol																
Isopropylbenzene																
Nitrate																
Nitrate/Nitrite																
p-Isopropyltoluene (p-cymene)																
Sulfate	O		O		O		O		O		O		O		O	
Total No. of COPECs:	8	6	7	6	9	7	2	7	8	4	6	3	7	6	2	4

Notes:

Tier 1 results based on exposure point concentrations (EPCs) represented by 95% upper confidence limits for surface water and sediment samples, and upperbound bioaccumulation factors.

Tier 2 results based on EPCs represented by arithmetic average concentrations for surface water and sediment samples, and average bioaccumulation factors.

Note: Results presented do not take into account background considerations.

Evaluation criteria for surface water, included: (1) direct contact benchmarks; and (2) (3) water-to-fish tissue critical body residue estimation and hazard quotient calculation for NOAEL- and LOAEL-based effects.

Evaluation criteria for sediment, included: (1) direct contact benchmarks; and (2) (3) sediment-to-fish tissue critical body residue estimation and hazard quotient calculation for NOAEL- and LOAEL-based effects.

A blank cell indicates either that the COPEC was not selected for the medium, or that there were no evaluation criteria available.

"O" indicates that evaluation criteria were available, and a majority of the available criteria did not suggested significant adverse ecological impacts to aquatic receptors.

"DC" indicates Direct Contact evaluation criteria were exceeded (using weight-of-evidence approach discussed in text).

"F" indicates modeled Fish CBR hazard quotient was greater than 1 (using NOAEL- and LOAEL-based HQ). See Section 8 for critical discussion of modeled vs. measured fish COPEC concentrations.

[a] Constituents of Potential Ecological Concern (COPECs) identified based on results of screening assessment.

LOAEL lowest observed adverse effect level

NOAEL no observed adverse effect level

Table 7-16
Summary of Surface Water and Sediment COPECs - For Direct Contact and Fish Body Residue Exposure Pathways

COPEC [a]	Tier 1 Approach								Tier 2 Approach							
	Central Creek WS		Harrison Bayou WS		Goose Prairie Ck. WS		Saunders Branch WS		Central Creek WS		Harrison Bayou WS		Goose Prairie Ck. WS		Saunders Branch WS	
	Surface Water	Sediment	Surface Water	Sediment	Surface Water	Sediment	Surface Water	Sediment	Surface Water	Sediment	Surface Water	Sediment	Surface Water	Sediment	Surface Water	Sediment
Aluminum	DC	O	DC, F	O	DC	O		O	DC	O	DC	O	DC	O		O
Barium	DC		DC		DC		DC		DC		DC		DC		DC	
Cadmium	DC, F	F		F		F		F	DC, F	F		O		F		O
Chromium			O								O					
Copper	DC, F	F	DC, F	F	DC, F	F		F	DC	O	DC	O	DC	O		O
Iron	DC		DC		DC				DC		DC		DC			
Lead	DC		DC		DC	DC, F	DC		DC		DC		DC	DC	DC	
Manganese	O		O		O			O	O		O		O			O
Mercury		O		O		DC, F		O		O		O		DC		O
Nickel		F		F				F		F		F				F
Selenium		O	O	O	O	O		O		O	O	O	O	O		O
Silver						DC, F								DC, F		
Thallium		O	O	O	F	O				O	O	O	O	O		
Vanadium	F		F					F	F		F					F
Zinc		F		F	F	F		F		O		O	F	F		O
2,3,7,8-TCDD TEQ	DC, F	DC	F	DC	F	O		DC	DC	DC	O	DC	O	O		DC
4,4'-DDD						O								O		
4,4'-DDT						O								O		
Aroclor-1254						O								O		
Bis(2-ethylhexyl)phthalate				DC	DC, F			DC				DC	DC, F			DC
Chloride																
Carbon disulfide		DC				DC				DC				DC		
Dieldrin						O								O		
Isobutanol																
Isopropylbenzene																
Nitrate																
Nitrate/Nitrite																
p-Isopropyltoluene (p-cymene)																
Sulfate	O		O		O		O		O		O		O		O	
Total No. of COPECs:	8	6	7	6	9	7	2	7	8	4	6	3	7	6	2	4

Notes:

Tier 1 results based on exposure point concentrations (EPCs) represented by 95% upper confidence limits for surface water and sediment samples, and upperbound bioaccumulation factors.

Tier 2 results based on EPCs represented by arithmetic average concentrations for surface water and sediment samples, and average bioaccumulation factors.

Note: Results presented do not take into account background considerations.

Evaluation criteria for surface water, included: (1) direct contact benchmarks; and (2) (3) water-to-fish tissue critical body residue estimation and hazard quotient calculation for NOAEL- and LOAEL-based effects.

Evaluation criteria for sediment, included: (1) direct contact benchmarks; and (2) (3) sediment-to-fish tissue critical body residue estimation and hazard quotient calculation for NOAEL- and LOAEL-based effects.

A blank cell indicates either that the COPEC was not selected for the medium, or that there were no evaluation criteria available.

"O" indicates that evaluation criteria were available, and a majority of the available criteria did not suggested significant adverse ecological impacts to aquatic receptors.

"DC" indicates Direct Contact evaluation criteria were exceeded (using weight-of-evidence approach discussed in text).

"F" indicates modeled Fish CBR hazard quotient was greater than 1 (using NOAEL- and LOAEL-based HQ). See Section 8 for critical discussion of modeled vs. measured fish COPEC concentrations.

[a] Constituents of Potential Ecological Concern (COPECs) identified based on results of screening assessment.

LOAEL lowest observed adverse effect level

NOAEL no observed adverse effect level

Table 7-17
Receptor-Specific Exposure Assumptions for Selected Measurement Receptors

Selected Measurement Receptor	Body Weight (kg)				Food Consumption Rate[a] (kg/day)				Diet Composition (%)	
	Min	Max	Mean	Ref.	Min	Max	Mean	Ref.		Ref.
Deer Mouse ***(Peromyscus maniculatus)***	0.0148	0.0315	0.022	USEPA, 1993 Sample and Suter, 1994	0.0027	0.0142	0.0034	Sample and Suter, 1994 USEPA, 1993	50% Plants (Seeds and fruit) 50% Soil invertebrates	Sample and Suter, 1994 USEPA, 1993
Raccoon ***(Procyon lotor)***	3.67	8.8	5.78	USEPA, 1993	0.171	0.48	0.29	USEPA, 1993	60% vegetation 15% soil invertebrates 15% aquatic invertebrates 5% fish 5% small mammals	USEPA, 1993
Southern Short-Tailed Shrew ***(Blarina carolinas)***	0.0125	0.0225	0.015	USEPA, 1993 Sample and Suter, 1994	0.008	0.01	0.009	Sample and Suter, 1994	90% Earthworms 10% soil invertebrates	USEPA, 1993
Red Fox ***(Vulpes vulpes)***	3.94	5.25	4.5	USEPA, 1993 Sample and Suter, 1994	0.31	0.596	0.45	USEPA, 1993 Sample and Suter, 1994	70% small mammals 15% birds 12% plants 3% insects	USEPA, 1993 Sample and Suter, 1994
Muskrat ***(Ondatra zibethicus)***	0.73	1.55	1.174	USEPA, 1993	0.19	0.53	0.35	USEPA, 1993	90% aquatic vegetation 10% terrestrial vegetation	USEPA, 1993
River Otter ***(Lutra canadensis)***	6.73	9.2	8	USEPA, 1993	0.33	0.43	0.38	USEPA, 1993	90% fish 5% aquatic invertebrates 5% birds	USEPA, 1993
Common Snapping Turtle ***(Chelydra serpentina)***	3.16	10.5	5.6	USEPA, 1993	0.0316	0.168	0.0728	USEPA, 1993	35% aquatic vegetation 55% fish 5% aquatic invertebrates 5% mud/rocks/other	USEPA, 1993
Bank Swallow ***(Riparia riparia)***	0.012	0.0186	0.0146	Sample et al., 1997	0.0024	0.0037	0.0029	Sample et al., 1997	90% aquatic invertebrates 10% terrestrial invertebrates	Sample et al., 1997
American Woodcock ***(Scalopax minor)***	0.176	0.218	0.197	USEPA, 1993	0.136	0.168	0.152	USEPA, 1993	100% earthworms	USEPA, 1993
Belted Kingfisher ***(Ceryle alcyon)***	0.125	0.215	0.148	USEPA, 1993 Sample and Suter, 1994	0.0625	0.108	0.075	Sample and Suter, 1994	85% small fish 10% aquatic invertebrates 5% terrestrial vertebrates (lizards, snakes, frogs)	Sample and Suter, 1994
Red-tailed Hawk ***(Buteo jamicensis)***	0.957	1.235	1.126	USEPA, 1993	0.082	0.136	0.109	USEPA, 1993	60% mammals 23% fish 9% birds 8% reptiles	USEPA, 1993
Townsend's Big-Eared Bat **(*Corynorhinus townsendii*)**	0.007	0.012	0.0095	Davis and Schmidly, 1994	0.001	0.004	0.003	USACHPPM, 2004 Assumed similar to little brown bat	100% moths and butterflies	TPWD, 2006 (on-line species profile)
Fathead Minnow ***(Pimephales promelas)***	NAP	NAP	NAP		NAP	NAP	NAP		NAP	
Brown Bullhead Catfish ***(Ictalurus nebulosus)***	NAP	NAP	0.5	fishbase.org web site	NAP	NAP	NAP		100% benthic invertebrates	Conservative assumption
Deer Mouse ***(Peromyscus maniculatus)***	0.000068 [b]	Sample and Suter, 1994, Beyer et al., 1994		0.0066	Sample and Suter, 1994		0.014	0.128	0.059	Sample and Suter, 1994 USEPA, 1993
Raccoon ***(Procyon lotor)***	0.0261 [c]	USEPA, 1993		0.476	USEPA, 1993		5.3	814	258	TPWD, 2003
Southern Short-Tailed Shrew ***(Blarina carolinas)***	0.00117 [b]	Sample and Suter, 1994		0.0033	Sample and Suter, 1994		0.03	1.8	0.39	Sample and Suter, 1994
Red Fox ***(Vulpes vulpes)***	0.0126 [b]	Sample and Suter, 1994, Beyer et al., 1994		0.38	Sample and Suter, 1994		100	2000	1038	USEPA, 1993, Sample and

Table 7-17
Receptor-Specific Exposure Assumptions for Selected Measurement Receptors

Selected Measurement Receptor	Soil and/or Sediment Ingestion Rate [h] (kg/day)		Water Ingestion Rate (L/day)		Home Range [f] (ha)			
	Mean	Ref	Mean	Ref	Min	Max	Mean	Ref
Muskrat ***(Ondatra zibethicus)***	0.0315 [d]	USEPA, 1993	0.114	EPA, 1993	0.048	0.17	0.134	USEPA, 1993
River Otter ***(Lutra canadensis)***	0.104 [d,e]	Sample and Suter, 1994	0.648	EPA, 1993	295	1900	400	USEPA, 1993
Common Snapping Turtle ***(Chelydra serpentina)***	0.00089 [d]	Estimated at 5% food ingestion rate	0.112	EPA, 1993	0.24	8.9	4.54	USEPA, 1993
Bank Swallow ***(Riparia riparia)***	0.00015 [d]	Assumed based on 5% of food con-sumption rate	0.0035	EPA, 1993	20 [h]	200	100 [g]	Sample et al., 1997
American Woodcock ***(Scalopax minor)***	0.0152 [b]	Beyer et al., 1994	0.0197	EPA, 1993	0.3	171	23	Sample et al., 1997
Belted Kingfisher ***(Ceryle alcyon)***	0.00015 [d]	Sample and Suter, 1994	0.016	Sample and Suter, 1994	48	1500	NA	USEPA, 1993
Red-tailed Hawk ***(Buteo jamicensis)***	0.00995 [b]	Beyer et al., 1994	0.064	EPA, 1993	381	989	697	USEPA, 1993
Townsend's Big-Eared Bat **(*Corynorhinus townsendii*)**	0	USACHPPM, 2004 Negligible, assumed similar to little brown bat.	0.0015	EPA, 1993 (allometric equation)	530 (1.3 km radius circle)	34600 (10.5 km radius circle)	1590 (2.25 km radius circle)	Fellers and Pierson, 2002
Fathead Minnow ***(Pimephales promelas)***	NAP		NAP		NAP	NAP	NAP	
Brown Bullhead Catfish ***(Ictalurus nebulosus)***	NAP		NAP		NAP	NAP	NAP	

Notes:

COPEC concentrations in the brown bullhead catfish were estimated using the TrophicTrace model (see appropriate appendix for details). An area use factor of 100% was assumed.

COPEC concentrations in the fathead minnow were estimated using surface water to fish tissue bioaccumulation factors. These modeled COPEC tissue concentrations were assessed for potential toxicity to fish via comparison with critical body residue (CBR) values for fish (see appropriate appendix for details).

These modeled COPEC tissue concentrations were assessed for potential toxicity to fish via comparison with critical body residue (CBR) values for fish (see appropriate appendix for details).

COPEC doses to the minnow and the catfish were not calculated, as they were for other measurement receptors, because NOAEL- and LOAEL-based dose information are not available for fish.

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Mean values represent either reported mean value, or the straight average of individual values reported in the cited reference.

[a] Food ingestion rates for all measurement receptors except the Raccoon and River Otter are listed on a wet-weight basis. Ingestion rates were converted to a dry-weight basis for inclusion in the food chain models by summing the dry-weight of each receptor's dietary components (using percent moisture data from Sample and Suter, 1994), weighted by proportion of that food component in the overall diet.

[b] Intake is from soil.

[c] 50% of media ingestion rate assumed to be from sediment, 50% from soil.

[d] Intake is from sediment.

[e] Mink used as surrogate.

[f] Watershed areas were calculated by multiplying the length of the watershed by the width, defined as 500 feet on either side of the water body. AUFs for aquatic receptors were calculated assuming the organism used the watershed corridor exclusively (i.e., the home range was assumed to fall along the watershed corridor, rather than be represented by a circle).

[g] Only a maximum home range for the bank swallow was provided in Sample et al., 1997. It was assumed that the minimum home range is 10% of the maximum home range (i.e., 20 ha), and the mean home range is 50% of the maximum (i.e., 100 ha) for the Tier 1 and Tier 2 evaluations, respectively.

[h] Soil/Sediment ingestion rates shown in this table are based on a percentage of wet-weight food intake. Before being used in the food chain models, they were re-calculated based on dry-weight food intake.

EPA U.S. Environmental Protection Agency
ha hectare
kg kilogram
L litre
Max maximum
Min minimum
NA not available
NAP not applicable
Ref reference

Table 7-18
Exposure Point Concentrations for Preliminary COPECs [a]

	Total Soil (0-3') - mg/kg					
	Waste Sub-Area Soil		Industrial Sub-Area Soil		Low Impact Sub-Area Soil	
COPEC	Tier 1 (95% UCL)	Tier 2 (Avg)	Tier 1 (95% UCL)	Tier 2 (Avg)	Tier 1 (95% UCL)	Tier 2 (Avg)
Inorganic Analytes						
Aluminum	9.30E+03	8.02E+03	9.54E+03	8.99E+03	Not a COPEC	Not a COPEC
Antimony	8.22E-01	6.95E-01	2.10E+00	2.05E+00	5.68E-01	5.12E-01
Barium	5.53E+02	4.81E+02	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Cadmium	6.67E-01	5.66E-01	8.87E-01	7.47E-01	3.95E-01	3.19E-01
Chromium	1.72E+01	1.57E+01	1.88E+01	1.76E+01	1.16E+01	1.09E+01
Copper	1.15E+01	9.30E+00	1.76E+01	1.33E+01	7.35E+00	6.48E+00
Iron	1.42E+04	1.27E+04	1.74E+04	1.64E+04	1.01E+04	9.10E+03
Lead	5.58E+01	4.62E+01	4.75E+01	3.99E+01	2.30E+01	2.03E+01
Manganese	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	9.62E+02	8.30E+02
Mercury (inorganic)	9.67E-02	8.59E-02	5.89E-01	2.65E-01	5.69E-02	5.07E-02
Nickel	8.42E+00	7.73E+00	1.07E+01	9.95E+00	6.83E+00	6.19E+00
Selenium	6.71E-01	5.94E-01	1.50E+00	1.17E+00	3.97E-01	3.70E-01
Silver	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Strontium	2.71E+01	2.12E+01	5.39E+01	3.84E+01	1.43E+01	1.30E+01
Thallium	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Vanadium	2.36E+01	2.08E+01	2.60E+01	2.48E+01	1.54E+01	1.45E+01
Zinc	5.17E+01	4.15E+01	6.16E+01	5.34E+01	5.97E+01	4.80E+01
Volatile Organic Compounds						
Isobutanol	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
p-Isopropyltoluene	4.40E-03	3.13E-03	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Semivolatile Organic Compounds						
Benzoic Acid	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	2.50E-02	2.19E-02
bis(2-ethylhexyl)phtha	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Butylbenzyl phthalate	5.43E-01	4.45E-01	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Hexachlorobenzene	1.10E-01	6.30E-02	1.71E-02	1.48E-02	2.36E-04	2.04E-04
Pentachlorophenol	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	5.32E-01	3.80E-01
Dioxins/Furans						
2,3,7,8-TCDD TEQ	3.40E-05	2.05E-05	7.62E-06	5.82E-06	3.95E-06	3.18E-06
Organochlorine Pesticides						
4,4'-DDD	5.15E-04	3.62E-04	1.88E-03	1.64E-03	1.42E-03	8.25E-04
4,4'-DDE	2.45E-03	1.86E-03	1.72E-02	1.20E-02	4.15E-03	3.08E-03
4,4'-DDT	2.93E-04	2.21E-04	6.89E-03	5.57E-03	1.82E-03	1.10E-03
Aldrin	Not a COPEC	Not a COPEC	2.82E-03	1.76E-03	2.04E-04	1.81E-04
alpha-Chlordane	2.13E-04	1.98E-04	2.60E-03	1.34E-03	3.68E-04	3.11E-04
Chlordane	Not a COPEC	Not a COPEC	1.83E-04	1.60E-04	1.93E-04	2.16E-04
cis-Nonachlor	Not a COPEC	Not a COPEC	3.91E-04	2.70E-04	2.52E-04	2.19E-04
Dieldrin	Not a COPEC	Not a COPEC	1.70E-03	1.51E-03	1.88E-04	1.76E-04
Endrin	4.91E-04	3.35E-04	4.03E-04	2.95E-04	2.77E-04	2.64E-04
gamma-Chlordane	Not a COPEC	Not a COPEC	5.38E-03	3.61E-03	Not a COPEC	Not a COPEC
Heptachlor	Not a COPEC	Not a COPEC	1.87E-04	1.65E-04	Not a COPEC	Not a COPEC
Mirex	2.89E-04	2.38E-04	Not a COPEC	Not a COPEC	3.43E-04	2.87E-04
Oxychlordane	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	1.84E-04	1.71E-04
Pentachloroanisole	2.58E-04	2.05E-04	8.77E-04	5.07E-04	9.03E-04	5.57E-04
trans-Nonachlor	Not a COPEC	Not a COPEC	4.15E-04	2.72E-04	3.16E-04	2.64E-04
Polychlorinated Biphenyls						
Aroclor 1242	3.08E-03	2.09E-03	7.40E-03	6.31E-03	3.04E-03	2.53E-03
Aroclor 1248	Not a COPEC	Not a COPEC	1.32E-03	1.11E-03	1.37E-03	1.17E-03
Aroclor 1254	6.24E-03	4.33E-03	5.39E-02	3.78E-02	4.04E-03	3.27E-03
Aroclor 1260	2.60E-03	1.97E-03	1.93E-02	1.70E-02	6.22E-03	4.04E-03
Aroclor 1268	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	8.97E-04	8.43E-04
Nitroaromatic Compounds						
1,3,5-Trinitrobenzene	1.71E+01	1.26E+01	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
1,3-Dinitrobenzene	1.24E+00	1.14E+00	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
2,4,6-Trinitrotoluene	2.87E+02	1.48E+02	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
2,4-Dinitrotoluene	1.01E+02	5.04E+01	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
2,6-Dinitrotoluene	1.36E+01	7.15E+00	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
HMX	1.36E+00	1.00E+00	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Perchlorate						
Perchlorate	2.61E-01	1.63E-01	3.79E+00	2.93E+00	9.01E-02	4.97E-02
General Chemistry						
Nitrate	1.34E+00	1.00E+00	1.86E+00	1.21E+00	1.86E+00	1.13E+00
Nitrate/Nitrite	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Sulfate	4.00E+02	2.41E+02	1.35E+02	9.41E+01	2.06E+03	1.38E+03

Table 7-18
Exposure Point Concentrations for Preliminary COPECs [a]

	Shallow Soil (0-0.5') - mg/kg					
	Waste Sub-Area Soil		Industrial Sub-Area Soil		Low Impact Sub-Area Soil	
COPEC	Tier 1 (95% UCL)	Tier 2 (Avg)	Tier 1 (95% UCL)	Tier 2 (Avg)	Tier 1 (95% UCL)	Tier 2 (Avg)
Inorganic Analytes						
Aluminum	9.02E+03	6.95E+03	7.38E+03	7.05E+03	Not a COPEC	Not a COPEC
Antimony	2.57E+00	2.06E+00	2.53E+00	2.38E+00	6.37E-01	5.09E-01
Barium	1.01E+03	5.33E+02	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Cadmium	5.20E-01	4.73E-01	4.03E-01	3.79E-01	3.84E-01	3.02E-01
Chromium	1.61E+01	1.46E+01	1.82E+01	1.73E+01	1.22E+01	1.10E+01
Copper	1.37E+01	1.09E+01	1.87E+01	1.76E+01	7.43E+00	6.53E+00
Iron	1.28E+04	1.12E+04	1.68E+04	1.59E+04	1.00E+04	9.10E+03
Lead	7.44E+01	4.77E+01	7.30E+01	6.49E+01	2.51E+01	2.21E+01
Manganese	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	9.35E+02	8.30E+02
Mercury (inorganic)	1.10E-01	9.02E-02	7.96E-01	4.57E-01	5.95E-02	5.40E-02
Nickel	7.49E+00	7.04E+00	8.88E+00	8.33E+00	7.10E+00	6.36E+00
Selenium	6.76E-01	5.98E-01	2.63E+00	1.98E+00	4.13E-01	3.74E-01
Silver	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Strontium	3.28E+01	2.45E+01	2.65E+01	2.46E+01	1.43E+01	1.30E+01
Thallium	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Vanadium	2.15E+01	1.89E+01	2.54E+01	2.38E+01	1.53E+01	1.45E+01
Zinc	6.24E+01	4.92E+01	7.62E+01	7.04E+01	5.89E+01	4.79E+01
Volatile Organic Compounds						
Isobutanol	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
p-Isopropyltoluene	3.51E-03	3.21E-03	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Semivolatile Organic Compounds						
Benzoic Acid	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	6.80E-02	5.10E-02
bis(2-ethylhexyl)phtha	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Butylbenzyl phthalate	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Hexachlorobenzene	2.10E-01	1.52E-01	1.77E-04	1.54E-04	2.20E-04	1.93E-04
Pentachlorophenol	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	4.23E-01	2.48E-01
Dioxins/Furans						
2,3,7,8-TCDD TEQ	7.33E-05	3.16E-05	9.34E-06	7.39E-06	3.95E-06	3.18E-06
Organochlorine Pesticides						
4,4'-DDD	6.15E-04	4.55E-04	1.77E-03	1.51E-03	1.40E-03	8.00E-04
4,4'-DDE	2.06E-03	1.48E-03	1.82E-02	1.43E-02	4.30E-03	3.10E-03
4,4'-DDT	2.85E-04	1.98E-04	6.08E-03	4.99E-03	2.23E-03	1.07E-03
Aldrin	Not a COPEC	Not a COPEC	1.50E-03	1.38E-03	1.87E-04	1.76E-04
alpha-Chlordane	2.90E-04	2.37E-04	2.08E-03	1.28E-03	3.76E-04	3.15E-04
Chlordane	Not a COPEC	Not a COPEC	1.84E-04	1.60E-04	1.88E-04	1.73E-04
cis-Nonachlor	Not a COPEC	Not a COPEC	3.40E-04	2.76E-04	2.48E-04	2.12E-04
Dieldrin	Not a COPEC	Not a COPEC	3.29E-04	2.78E-04	1.86E-04	1.72E-04
Endrin	4.39E-04	3.17E-04	3.80E-04	3.31E-04	2.75E-04	2.38E-04
gamma-Chlordane	Not a COPEC	Not a COPEC	9.74E-03	5.40E-03	Not a COPEC	Not a COPEC
Heptachlor	Not a COPEC	Not a COPEC	2.11E-04	1.86E-04	Not a COPEC	Not a COPEC
Mirex	3.52E-04	2.47E-04	Not a COPEC	Not a COPEC	3.41E-04	2.88E-04
Oxychlordane	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Pentachloroanisole	2.98E-04	2.24E-04	7.16E-04	5.09E-04	8.83E-04	5.62E-04
trans-Nonachlor	Not a COPEC	Not a COPEC	3.59E-04	2.82E-04	3.04E-04	2.53E-04
Polychlorinated Biphenyls						
Aroclor 1242	3.34E-03	2.22E-03	6.94E-03	5.90E-03	3.07E-03	2.55E-03
Aroclor 1248	Not a COPEC	Not a COPEC	1.45E-03	1.27E-03	1.42E-03	1.21E-03
Aroclor 1254	5.97E-03	4.21E-03	5.66E-02	4.34E-02	4.11E-03	3.32E-03
Aroclor 1260	2.66E-03	1.94E-03	1.69E-02	1.47E-02	7.47E-03	4.07E-03
Aroclor 1268	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	8.50E-04	7.92E-04
Nitroaromatic Compounds						
1,3,5-Trinitrobenzene	8.46E+00	5.16E+00	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
1,3-Dinitrobenzene	2.38E-01	1.49E-01	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
2,4,6-Trinitrotoluene	4.91E+02	2.47E+02	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
2,4-Dinitrotoluene	1.23E+00	5.56E-01	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
2,6-Dinitrotoluene	2.40E+00	1.24E+00	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
HMX	1.43E+00	1.03E+00	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Perchlorate						
Perchlorate	1.32E-01	9.65E-02	3.62E+00	2.12E+00	2.80E-01	7.70E-02
General Chemistry						
Nitrate	1.08E+00	6.12E-01	1.12E+00	9.11E-01	6.47E-02	4.49E-02
Nitrate/Nitrite	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Sulfate	1.04E+02	4.14E+01	1.75E+02	1.16E+02	2.30E+02	1.30E+02

Table 7-18
Exposure Point Concentrations for Preliminary COPECs [a]

	Surface Water (mg/L)							
	Goose Prairie Creek		Central Creek		Harrison Bayou		Saunders Branch	
COPEC	Tier 1 (95% UCL)	Tier 2 (Avg)	Tier 1 (95% UCL)	Tier 2 (Avg)	Tier 1 (95% UCL)	Tier 2 (Avg)	Tier 1 (95% UCL)	Tier 2 (Avg)
Inorganic Analytes								
Aluminum	2.10E+00	1.73E+00	6.11E+00	4.16E+00	2.03E+01	1.12E+01	Not a COPEC	Not a COPEC
Antimony	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Barium	1.81E-01	1.38E-01	1.40E-01	1.24E-01	2.58E-01	2.09E-01	2.61E-01	1.84E-01
Cadmium	Not a COPEC	Not a COPEC	2.49E-03	2.09E-03	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Chromium	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	1.27E-02	9.95E-03	Not a COPEC	Not a COPEC
Copper	1.42E-02	1.23E-02	1.18E-02	9.31E-03	1.69E-02	1.19E-02	Not a COPEC	Not a COPEC
Iron	3.14E+00	2.68E+00	5.98E+00	4.18E+00	2.91E+01	1.61E+01	Not a COPEC	Not a COPEC
Lead	7.76E-03	6.26E-03	5.18E-03	4.09E-03	7.24E-03	5.66E-03	3.00E-03	2.00E-03
Manganese	2.73E-01	2.12E-01	4.54E-01	3.17E-01	9.37E-01	6.92E-01	Not a COPEC	Not a COPEC
Mercury (inorganic)	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Nickel	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Selenium	3.74E-03	3.23E-03	Not a COPEC	Not a COPEC	4.63E-03	3.90E-03	Not a COPEC	Not a COPEC
Silver	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Strontium	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Thallium	1.17E-03	1.00E-03	Not a COPEC	Not a COPEC	7.55E-04	5.86E-04	Not a COPEC	Not a COPEC
Vanadium	Not a COPEC	Not a COPEC	3.33E-02	2.64E-02	6.18E-02	4.29E-02	Not a COPEC	Not a COPEC
Zinc	8.78E-02	6.50E-02	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Volatile Organic Compounds								
Isobutanol	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
p-Isopropyltoluene	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Semivolatile Organic Compounds								
Benzoic Acid	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
bis(2-ethylhexyl)phthalate	2.43E-02	1.43E-02	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Butylbenzyl phthalate	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Hexachlorobenzene	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Pentachlorophenol	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Dioxins/Furans								
2,3,7,8-TCDD TEQ	8.59E-09	7.00E-09	1.22E-08	1.07E-08	9.44E-09	8.00E-09	Not a COPEC	Not a COPEC
Organochlorine Pesticides								
4,4'-DDD	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
4,4'-DDE	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
4,4'-DDT	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Aldrin	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
alpha-Chlordane	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Chlordane	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
cis-Nonachlor	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Dieldrin	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Endrin	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
gamma-Chlordane	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Heptachlor	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Mirex	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Oxychlordane	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Pentachloroanisole	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
trans-Nonachlor	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Polychlorinated Biphenyls								
Aroclor 1242	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Aroclor 1248	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Aroclor 1254	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Aroclor 1260	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Aroclor 1268	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Nitroaromatic Compounds								
1,3,5-Trinitrobenzene	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
1,3-Dinitrobenzene	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
2,4,6-Trinitrotoluene	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
2,4-Dinitrotoluene	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
2,6-Dinitrotoluene	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
HMX	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Perchlorate								
Perchlorate	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
General Chemistry								
Nitrate	8.86E-01	4.70E-01	8.67E-01	4.79E-01	7.46E-01	4.32E-01	9.00E-02	3.25E-02
Nitrate/Nitrite	8.12E-02	6.18E-02	7.06E-02	5.55E-02	5.84E+01	2.93E+01	Not a COPEC	Not a COPEC
Sulfate	1.42E+01	1.10E+01	6.09E+00	5.14E+00	5.76E+01	4.15E+01	5.00E+00	2.88E+00

Table 7-18
Exposure Point Concentrations for Preliminary COPECs [a]

	Sediment (mg/kg)							
	Goose Prairie Creek		Central Creek		Harrison Bayou		Saunders Branch	
COPEC	Tier 1 (95% UCL)	Tier 2 (Avg)	Tier 1 (95% UCL)	Tier 2 (Avg)	Tier 1 (95% UCL)	Tier 2 (Avg)	Tier 1 (95% UCL)	Tier 2 (Avg)
Inorganic Analytes								
Aluminum	1.03E+04	8.98E+03	9.69E+03	8.09E+03	1.03E+04	7.50E+03	1.63E+04	1.18E+04
Antimony	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Barium	1.34E+02	1.18E+02	1.32E+02	1.18E+02	2.86E+02	2.32E+02	1.60E+02	1.24E+02
Cadmium	5.24E-01	4.84E-01	5.48E-01	4.57E-01	1.83E-01	1.83E-01	2.14E-01	1.62E-01
Chromium	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Copper	1.27E+01	1.08E+01	7.20E+00	6.17E+00	7.78E+00	6.82E+00	1.07E+01	8.76E+00
Iron	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Lead	7.66E+01	5.97E+01	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Manganese	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	4.88E+02	3.46E+02
Mercury (inorganic)	2.65E-01	2.09E-01	9.58E-02	8.35E-02	8.29E-02	6.13E-02	8.01E-02	5.78E-02
Nickel	1.30E+01	1.13E+01	9.33E+00	8.12E+00	1.10E+01	9.70E+00	1.10E+01	8.62E+00
Selenium	1.29E+00	1.10E+00	8.67E-01	7.51E-01	9.08E-01	7.65E-01	8.74E-01	6.32E-01
Silver	2.66E+00	2.05E+00	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Strontium	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Thallium	7.02E-01	6.22E-01	7.12E-01	6.14E-01	6.00E-01	4.92E-01	Not a COPEC	Not a COPEC
Vanadium	2.94E+01	2.65E+01	2.08E+01	1.81E+01	2.87E+01	2.13E+01	3.08E+01	2.60E+01
Zinc	9.41E+01	7.78E+01	3.82E+01	3.22E+01	3.58E+01	3.15E+01	5.15E+01	4.30E+01
Volatile Organic Compounds								
Isobutanol	Not a COPEC	Not a COPEC	6.10E-02	6.10E-02	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
p-Isopropylbenzene	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Semivolatile Organic Compounds								
Benzoic Acid	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
bis(2-ethylhexyl)phthalate	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	2.82E-01	2.33E-01	3.06E-01	2.27E-01
Butylbenzyl phthalate	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Hexachlorobenzene	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Pentachlorophenol	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Dioxins/Furans								
2,3,7,8-TCDD TEQ	1.56E-06	1.27E-06	8.87E-06	5.59E-06	1.41E-05	4.00E-06	6.98E-06	6.98E-06
Organochlorine Pesticides								
4,4'-DDD	2.97E-03	2.56E-03	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
4,4'-DDE	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
4,4'-DDT	3.04E-03	2.61E-03	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Aldrin	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
alpha-Chlordane	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Chlordane	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
cis-Nonachlor	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Dieldrin	3.00E-03	2.57E-03	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Endrin	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
gamma-Chlordane	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Heptachlor	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Mirex	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Oxychlordane	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Pentachloroanisole	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
trans-Nonachlor	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Polychlorinated Biphenyls								
Aroclor 1242	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Aroclor 1248	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Aroclor 1254	5.10E-02	4.20E-02	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Aroclor 1260	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Aroclor 1268	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Nitroaromatic Compounds								
1,3,5-Trinitrobenzene	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
1,3-Dinitrobenzene	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
2,4,6-Trinitrotoluene	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
2,4-Dinitrotoluene	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
2,6-Dinitrotoluene	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
HMX	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Perchlorate								
Perchlorate	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
General Chemistry								
Nitrate	Not a COPEC	Not a COPEC	1.30E-01	9.50E-02	7.48E-01	4.60E-01	9.88E-01	5.95E-01
Nitrate/Nitrite	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC	Not a COPEC
Sulfate	6.05E+00	4.59E+00	2.00E+01	1.39E+01	7.51E+01	5.13E+01	3.00E+01	2.58E+01

[a] Exposure point concentrations that were used in the food chain models. Results may vary slightly from results in COPEC summary tables. Mean and 95% UCL concentrations were sometimes re-calculated if elevated detection limits resulted in mean values that were higher than the 95% UCL, or 95% UCLs that exceeded maximum concentrations. See text for details.

Avg - Average (i.e., mean) value
COPEC - Chemical of potential ecological concern
mg/kg - milligram per killigram
mg/L - milligram per liter
UCL - Upper confidence limit on the mean

"Not a COPEC" indicates that the chemical was not selected as a preliminary COPEC for that particular sub-area or watershed.

Table 7-19
Conversion of Food Ingestion Rates on a Wet-Weight Basis to a Dry-Weight Basis

	Food Ingestion Rate (WET) (kg wet weight/day) [a]				Diet [b]											Food Ingestion Rate (DRY) (kg dry weight/day) [c]		
Receptor	Min	Max	Mean	Source	Aq. Inverts	Fish	Aq. Plants	Terr. Inverts (all)	Terr. Inverts (earth-worms only)	Terr. Inverts (all except earth-worms)	Mam-mals	Birds	Reptiles/Amphibs	Terr plants (all)	Terr plants (seeds)	Min	Max	Mean
Deer Mouse [d]	0.0027	0.0142	0.0034	EPA, 1993 & Sample and Suter, 1994	0	0	0	0.5	0	0	0	0	0	0	0.5	0.00162	0.00852	0.00204
Raccoon	NA- Ingestion Rate values are calculated using the allometric equation for mammals (EPA, 1993), which are already in dry weight																	
Short-Tailed Shrew	0.008	0.01	0.009	Sample and Suter, 1994	0	0	0	0	0.9	0.1	0	0	0	0	0	0.0014	0.0018	0.0016
Red Fox	0.31	0.596	0.45	Sample and Suter, 1994	0	0	0	0.03	0	0	0.7	0.15	0	0.12	0	0.105	0.202	0.152
Muskrat	0.19	0.53	0.35	EPA, 1993	0	0	0.9	0	0	0	0	0	0	0.1	0	0.0467	0.1304	0.0861
River Otter	NA- Ingestion Rate values are calculated using the allometric equation for mammals (EPA, 1993), which are already in dry weight																	
Snapping Turtle	0.0316	0.168	0.0728	EPA, 1993	0.05	0.55	0.35	0	0	0	0	0	0	0	0	0.0077	0.0410	0.0178
Bank Swallow	0.0024	0.0037	0.0029	Sample et al, 1997	NA; Sample, 1997 states that moisture content for insects in bank swallow diet = 76.3%											0.00057	0.00088	0.00069
American Woodcock	0.136	0.168	0.152	EPA, 1993	0	0	0	0	1	0	0	0	0	0	0	0.0218	0.0269	0.0243
Belted Kingfisher	0.0625	0.108	0.075	Sample and Suter, 1994	0.125	0.875	0	0	0	0	0	0	0	0	0	0.0172	0.0298	0.0207
Red-Tailed Hawk	0.082	0.136	0.109	EPA, 1993	0	0.26	0	0	0	0	0.63	0.11	0	0	0	0.0255	0.0423	0.0339
Townsend's Big-Eared Bat	0.001	0.004	0.003	USACHPPM, 2004 (little brown bat)	NA; Diet 100% moths. Assumed that prey moisture content identical to bank swallow diet (i.e., = 76.3%)											0.00024	0.00095	0.00071

[a] Food ingestion rates for the receptors were obtained from the sources cited. With the exception of the raccoon and the river otter, whose ingestion rates were obtained from the allometric food ingestion equation for mammals from EPA (1993), all ingestion rates were in kg wet weight/day. Because the food chain models use kg dry weight/day, the receptors' ingestion rates required conversion. To convert to dry weight, the wet weight ingestion rate was multiplied by the fraction of each food item in the diet, and then by (1 - the % water content for that food item) (using data from Sample and Suter, 1994; see below), and then summed for the receptor. For example, the minimum dry ingestion rate for the deer mouse was calculated as follows:

Min Dry Weight IR = Min Wet Weight IR x (fraction diet terr. Inverts x (1 - %moisture content terr inverts)) + Min Wet Weight IR x (fraction diet seeds x (1 - % moisture content seeds))
Min Dry Weight IR = 0.0027 kg/day x (0.5 x 0.29) + 0.0027 kg/day x (0.5 x .91)
Min Dry Weight IR = 0.00039 kg/day + 0.00123 kg/day
Min Dry Weight IR = 0.00162 kg dry weight/day

% Water content of prey items derived from Sample and Suter (1994):

Aquatic Invertebrates	= 0.79	Mammals	= 0.68
Fish	= 0.715	Birds	= 0.68
Aquatic Plants	= 0.78	Reptiles/amphibians	= 0.76
Terrestrial invertebrates (all)	= 0.71	Terrestrial Plants (all)	= 0.52
Terrestrial invertebrates (earthworms)	= 0.84	Terrestrial Plants (seeds)	= 0.09
Terrestrial Invertebrates (all except earthworms)	= 0.65		

[b] See Table 7-17 in the Step 3 report.
[c] The food ingestion rate based on a dry-weight basis was used for the food chain modeling.
[d] The food ingestion rate for the white-footed mouse was used for the deer mouse.

EPA, 1993, Wildlife Exposure Factors Handbook. Volume I and II. Office of Research and Development, Washington, D.C.. EPA/600/R-93/187 a and b.
Sample, B.E. and Suter II, G.W., 1994. Estimating Exposure of Terrestrial Wildlife Contaminants. Environmental Sciences Division, Oak Ridge National Laboratory. ES/ER/TM-125.
Sample, B.E., Aplin, M.S., Efroymson, R.A., Sutter II, G.W., and Welsh, C.J.E., 1997. Methods and Tools for Estimation of the Exposure of Terrestrial Wildlife to Contaminants. Lockheed Martin Research Corporation. ORNL/TM-13391.
USACHPPM, 2004, Development of Terrestrial Exposure and Bioaccumulation Information for the Army Risk Assessment Modeling System (ARAMS), prepared for Health Effects Research Program, prepared by CH2M-Hill.

Table 7-20
Recommended Bioaccumulation/Bioconcentration Factors or Regression Equations Utilized for the Soil-to-Plant Pathway

COPEC in Soil	TCEQ [a] BAF/BCF	EPA, 2003 / Efroymson et al., 2001 [b] Minimum BAF/BCF	Median BAF/BCF	90^{th} Percentile BAF/BCF	Maximum BAF/BCF	Regression Equation [c]	Other BAF/BCF	Recommended Tier 1 (RME) BAF/BCF [d]	Recommended Tier 2 (Average) BAF/BCF [d]	Rationale for Recommended Tier 2 BAF/BCF
1,3,5-Trinitrobenzene	-- [e]	--	--	--	--	Log (BCF)=-0.578(Log[Kow])+1.588	--	8.96	5.62	Travis & Arms Kow Regression Eq.
1,3-Dinitrobenzene	--	--	--	--	--	Log (BCF)=-0.578(Log[Kow])+1.588	--	5.33	4.42	Travis & Arms Kow Regression Eq.
2,3,7,8-TCDD TEQ	--	--	--	--	--	Log (BCF)=-0.578(Log[Kow])+1.588	--	0.0045	0.0039	Travis & Arms Kow Regression Eq.
2,4,6-Trinitrotoluene	--	7.00E-05	0.1595	--	0.32	--	--	0.32	0.16	Median BAF from USEPA (2003)
2,4-Dinitrotoluene	--	--	--	--	--	Log (BCF)=-0.578(Log[Kow])+1.588	--	2.78	2.13	Travis & Arms Kow Regression Eq.
2,6-Dinitrotoluene	--	--	--	--	--	Log (BCF)=-0.578(Log[Kow])+1.588	--	2.37	2.13	Travis & Arms Kow Regression Eq.
4,4'-DDD	--	0.00035	0.028	--	0.08	--	--	0.08	0.028	Median BAF from USEPA (2003)
4,4'-DDE	--	0.075	0.136	--	0.62	--	--	0.62	0.136	Median BAF from USEPA (2003)
4,4'-DDT	--	0.00035	0.028	--	0.08	--	--	0.08	0.028	Median BAF from USEPA (2003)
Aldrin	--	--	--	--	--	Log (BCF)=-0.578(Log[Kow])+1.588	--	0.0068	0.0049	Travis & Arms Kow Regression Eq.
alpha-Chlordane	--	--	--	--	--	Log (BCF)=-0.578(Log[Kow])+1.588	--	0.0403	0.0093	Travis & Arms Kow Regression Eq.
Aluminum	0.0015	--	--	--	--	--	0.0023 [f]	0.0023	0.0015	TCEQ (2001) BAF
Antimony	0.07	0.003	0.037	-	0.22	-	0.12 [f]	0.07	0.037	Median BAF from USEPA (2003)
Aroclor - 1242	--	--	--	--	--	Log (BCF)=-0.578(Log[Kow])+1.588	--	0.16	0.0084	Travis & Arms Kow Regression Eq.
Aroclor - 1248	--	--	--	--	--	Log (BCF)=-0.578(Log[Kow])+1.588	--	0.01	0.0084	Travis & Arms Kow Regression Eq.
Aroclor - 1254	--	--	--	--	--	Log (BCF)=-0.578(Log[Kow])+1.588	--	0.0088	0.0036	Travis & Arms Kow Regression Eq.
Aroclor - 1260	--	--	--	--	--	Log (BCF)=-0.578(Log[Kow])+1.588	--	0.0045	0.0006	Travis & Arms Kow Regression Eq.
Aroclor - 1268	--	--	--	--	--	Log (BCF)=-0.578(Log[Kow])+1.588	--	0.53	0.53	Travis & Arms Kow Regression Eq.
Barium	0.049	0.036	0.156	--	0.92	--	0.03 [g]	0.92	0.156	Median BAF from USEPA (2003)
Benzoic Acid	--	--	--	--	--	Log (BCF)=-0.578(Log[Kow])+1.588	--	3.21	3.21	Travis & Arms Kow Regression Eq.
bis(2-Ethylhexyl)phthalate	--	--	--	--	--	Log (BCF)=-0.578(Log[Kow])+1.588	--	0.00157	0.00055	Travis & Arms Kow Regression Eq.
Butylbenzyl phthalate	--	--	--	--	--	Log (BCF)=-0.578(Log[Kow])+1.588	--	0.062	0.056	Travis & Arms Kow Regression Eq.
Cadmium	0.14	0.0087	0.58571	3.3	22.8788	ln (AGP)=0.55(ln[soil])-0.48	0.35 [g]	Regression Equation	Regression Equation	Chemical-specific Regression Eq.
Chlordane	--	--	--	--	--	Log (BCF)=-0.578(Log[Kow])+1.588	--	0.0403	0.0093	Travis & Arms Kow Regression Eq.
Chromium	0.0052	0.021	0.041	--	0.48	--	0.001 [g]	0.48	0.041	Median BAF from USEPA (2003)
cis-Nonachlor	--	--	--	--	--	Log (BCF)=-0.578(Log[Kow])+1.588		0.040	0.009	Travis & Arms Kow Regression Eq.
Copper	0.29	0.0011	0.12432	0.63	7.4	ln (AGP)=0.39(ln[soil])+0.67	0.8 [g]	Regression Equation	Regression Equation	Chemical-specific Regression Eq.
Dieldrin	--	0.00855	0.024	--	1.64	--	--	1.64	0.024	Median BAF from USEPA (2003).
Endrin	--	--	--	--	--	Log (BCF)=-0.578(Log[Kow])+1.588	--	0.038	0.027	Travis & Arms Kow Regression Eq.
gamma-Chlordane	--	--	--	--	--	Log (BCF)=-0.578(Log[Kow])+1.588	--	0.0403	0.0093	Travis & Arms Kow Regression Eq.
Heptachlor	--	--	--	--	--	Log (BCF)=-0.578(Log[Kow])+1.588	--	0.016	0.012	Travis & Arms Kow Regression Eq.
Hexachlorobenzene	--	--	--	--	--	Log (BCF)=-0.578(Log[Kow])+1.588	--	0.019	0.016	Travis & Arms Kow Regression Eq.
HMX	--	--	--	--	--	Log (BCF)=-0.578(Log[Kow])+1.588	--	8.38	8.38	Travis & Arms Kow Regression Eq.
Iron	--	--	--	--	--	--	0.004 [g]	0.004	0.004	Value from IAEA (1994).
Isobutanol	--	--	--	--	--	Log (BCF)=-0.578(Log[Kow])+1.588	--	14.08	13.90	Travis & Arms Kow Regression Eq.
Lead	--	0.00011	0.0388	0.47	10.6011	ln (AGP)=0.56(ln[soil])-1.33	0.0011 [g]	Regression Equation	Regression Equation	Chemical-specific Regression Eq.
Manganese	0.1	0.0199	0.079	--	0.433	--	--	0.1	0.079	Median BAF from EPA (2003)
Mercury	0.0055	0.0015	0.65	5	12	ln (AGP)=0.54(ln[soil])-1.00	0.55 [f]	Regression Equation	Regression Equation	Chemical-specific Regression Eq.
Mirex	--	--	--	--	--	Log (BCF)=-0.578(Log[Kow])+1.588	-	0.034	0.0034	Travis & Arms Kow Regression Eq.
Nickel	0.025	0.00217	0.01786	1.4	22.2143	ln (AGP)=0.75(ln[soil])-2.22	0.18 [g]	Regression Equation	Regression Equation	Chemical-specific Regression Eq.
Nitrate	--	--	--	--	--	--	--	0.35	0.21	See Note (1)

Table 7-20
Recommended Bioaccumulation/Bioconcentration Factors or Regression Equations
Utilized for the Soil-to-Plant Pathway

COPEC in Soil	TCEQ [a] BAF/BCF	EPA, 2003 / Efroymson et al., 2001 [b] Minimum BAF/BCF	Median BAF/BCF	90th Percentile BAF/BCF	Maximum BAF/BCF	Regression Equation [c]	Other BAF/BCF	Recommended Tier 1 (RME) BAF/BCF [d]	Recommended Tier 2 (Average) BAF/BCF [d]	Rationale for Recommended Tier 2 BAF/BCF
Oxychlordane	--	--	--	--	--	Log (BCF)=-0.578(Log[Kow])+1.588	--	0.026	0.026	Travis & Arms Kow Regression Eq.
p-Isopropyltoluene	--	--	--	--	--	--	--	0.19	0.17	Travis & Arms Kow Regression Eq.
Pentachloroanisole	--	--	--	--	--	Log (BCF)=-0.578(Log[Kow])+1.588	--	0.033	0.027	Travis & Arms Kow Regression Eq.
Pentachlorophenol	--	--	--	--	--	Log (BCF)=-0.578(Log[Kow])+1.588	--	0.071	0.043	Travis & Arms Kow Regression Eq.
Perchlorate	--	--	--	--	--	ln (BCF) = 0.5891(ln[soil])+2.41	6,473 / 2,602 [h]	Regression Equation	Regression Equation	Chemical-specific Regression Eq.
Selenium	0.015	0.02	0.67189	3.0	77	ln (AGP)=1.1(ln[soil])-0.68	0.025 [f]	Regression Equation	Regression Equation	Chemical-specific Regression Eq.
Silver	0.17	0.0029	0.014	--	0.04	--	0.15 [f]	0.17	0.014	Median BAF from USEPA (2003).
Strontium	--	--	--	--	--	--	--	0.35	0.21	See Note (1)
Sulfate	--	--	--	--	--	--	--	0.35	0.21	See Note (1)
trans-Nonachlor	--	--	--	--	--	Log (BCF)=-0.578(Log[Kow])+1.588	--	0.04	0.0093	Travis & Arms Kow Regression Eq.
Vanadium	0.0036	--	--	--	--	--	0.004 [f]	0.004	0.0036	TCEQ (2001) BAF
Zinc	0.09	0.00855	0.36616	1.8	34.2857	ln (AGP)=0.56(ln[soil])+1.58	1.2 [f]	Regression Equation	Regression Equation	Chemical-specific Regression Eq.

Notes:

1. For inorganic chemicals without BAF/BCF data, BAF/BCFs were derived from the Baes et al. (1984) and IAEA (1994) data. The 95% upper confidence limit of the BAF/BCFs for chemicals presented with available data from these sources (i.e., 0.35) was used as the Tier 1 value, and the mean (i.e., 0.21) was used for the Tier 2 value.

[a] See Figure 30 Texas Administrative Code (TAC) §350.73(e).

[b] Values from EPA, 2003, *Guidance for Developing Ecological Soil Screening Levels (Eco-SSL)* , Office of Solid Waste and Emergency Response, OSWER 9285.7-55, November (Table 8), and/or Efroymson, R.A., et. al., 2001, *Uptake of Inorganic Chemicals from Soil by Plant Leaves: Regressions of Field Data* , Environ. Tox. Chem., 20:2561-2571 (Table 1).

[c] Efroymson, R.A., et. al., 2001, *Uptake of Inorganic Chemicals from Soil by Plant Leaves: Regressions of Field Data* , Environ. Tox. Chem., 20:2561-2571 for AGP (above ground plant tissue concentration) and Travis and Arms (1988) for BCF. Regression equation for perchlorate taken from Sample, B.E, A. Tsao, and M.S. Johnson, 2005, *Development of Soil-to-Plant Bioaccumulation Models for Energetic Compounds and Metabolites* , presentation at the 2005 Society of Environmental Toxicology and Chemistry (SETAC) conference, Baltimore, MD. (using the equation for pooled monocots and dicots.)

[d] For the values estimated using Travis and Arms (1988) Kow regression equation, the Tier 1 BCF used the lower Kow from the Hazardous Substances Database (HSDB) and the syrres.com SMILES fragment, and the Tier 2 BCF used the higher Kow from these two sources. If the log Kow for a chemical was lower than the lowest log Kow used to develop the model for developing bioconcentration factors for vegetation as presented in the Travis and Arms (1988) model (i.e., log Kow = 1.15), then the BAF/BCF was calculated using the minimal log Kow of 1.15.
Travis, C.C., and A.D. Arms, 1988, Bioconcentration of Organics in Beef, Milk, and Vegetation, Enironmental Science and Technology 22(3): 271-274.

[e] -- indicates that a BAF/BCF or regression equation is not available.

[f] Average of the vegetative and reproductive transfer factors presented in Baes et al. (1984); note: value from this reference used if no appropriate value available from IAEA (1994).

[g] IAEA (1994); note: value from this reference used, compared with Baes et al. (1984), as IAEA (1994) is more current.
International Atomic Energy Agency (IAEA), 1994, Handbook of Parameter Values for the Prediction of Radionuclide Transfer in Temperate Environments, Technical Report Series No. 364, Vienna.

[h] Values presented are average uptake factors derived from Smith, P.N, C.W. Theodorakis, T.A. Anderson, and R.J. Kendall, 2001, *Preliminary Assessment of Perchlorate in Ecological Receptors at the Longhorn Army Ammunition Plant (LHAAP),* Karnack, Texas, Ecotoxicology 10: 305-313, and EPA, 2002, *Perchlorate Environmental Contamination: Toxicological Review and Risk Characterization External Review Draft* , Office of Research and Development, NCEA-1-0503, January. See Note 2.

Table 7-21
Recommended Bioaccumulation/Bioconcentration Factors or Regression Equations Utilized for the Soil-to-Earthworm Pathway

Constituent	Sample, et al.[a]				Beyer [c] BAF/BCF	Recommended Tier 1 (RME) BAF/BCF	Recommended Tier 2 (Average) BAF/BCF	Rationale for Tier 2 (RME) BAF/BCF
	Median BAF/BCF	90th Percentile BAF/BCF	Maximum BAF/BCF	Regression Equation [b]				
1,3,5-Trinitrobenzene	-- [d]	--	--	see footnote "b" below	--	13.1	7.5	Kow Regression Eq., using average TOC
1,3-Dinitrobenzene	--	--	--	see footnote "b" below	--	13.1	7.6	Kow Regression Eq., using average TOC
2,3,7,8-TCDD TEQ	11.011	22.229	42.068	--	14.5	22.229	11.011	Median value from field studies
2,4,6-Trinitrotoluene	--	--	--	see footnote "b" below	--	13.3	7.7	Kow Regression Eq., using average TOC
2,4-Dinitrotoluene	--	--	--	see footnote "b" below	--	13.4	7.7	Kow Regression Eq., using average TOC
2,6-Dinitrotoluene	--	--	--	see footnote "b" below	--	13.4	7.7	Kow Regression Eq., using average TOC
4,4'-DDD	--	--	--	see footnote "b" below	--	15.5	8.9	Kow Regression Eq., using average TOC
4,4'-DDE	--	--	--	see footnote "b" below	--	15.6	9.0	Kow Regression Eq., using average TOC
4,4'-DDT	--	--	--	see footnote "b" below	--	16.1	9.3	Kow Regression Eq., using average TOC
Aldrin	--	--	--	see footnote "b" below	--	16.1	9.3	Kow Regression Eq., using average TOC
alpha-Chlordane	--	--	--	see footnote "b" below	--	15.8	9.1	Kow Regression Eq., using average TOC
Aluminum	0.043	0.118	0.1	--	--	0.118	0.043	Median value from field studies
Antimony	--	--	--	see footnote "b" below	--	1.14	0.3	Geom. mean of 19 values, see Note (1).
Aroclor - 1242	--	--	--	see footnote "b" below	--	15.8	9.1	Kow Regression Eq., using average TOC
Aroclor - 1248	--	--	--	see footnote "b" below	--	15.8	9.1	Kow Regression Eq., using average TOC
Aroclor - 1254	--	--	--	see footnote "b" below	--	16.2	9.3	Kow Regression Eq., using average TOC
Aroclor - 1260	--	--	--	see footnote "b" below	--	17.1	9.8	Kow Regression Eq., using average TOC
Aroclor - 1268	--	--	--	see footnote "b" below	--	14.0	8.1	Kow Regression Eq., using average TOC
Barium	0.091	0.16	0.31	--	--	0.16	0.091	Median value from field studies
Benzoic Acid	--	--	--	see footnote "b" below	--	13.3	7.7	Kow Regression Eq., using average TOC
Butylbenzyl phthalate	--	--	--	see footnote "b" below	--	14.9	8.6	Kow Regression Eq., using average TOC
Cadmium	7.708	40.69	190	ln (EW)=0.55(ln[soil])+2.82	--	Regression Equation	Regression Equation	Chemical-specific Regression Eq.
Chlordane	--	--	--	see footnote "b" below	--	15.8	9.1	Kow Regression Eq., using average TOC
Chromium	0.306	3.162	11.416	--	--	3.162	0.306	Median value from field studies
cis-Nonachlor	--	--	--	see footnote "b" below	--	15.8	9.1	Kow Regression Eq., using average TOC
Copper	0.515	1.531	5.492	ln (EW)=0.24(ln[soil])+1.8	--	Regression Equation	Regression Equation	Chemical-specific Regression Eq.
Dieldrin	--	--	--	see footnote "b" below	--	15.3	8.8	Kow Regression Eq., using average TOC
Endrin	--	--	--	see footnote "b" below	--	15.3	8.8	Kow Regression Eq., using average TOC
gamma-Chlordane	--	--	--	see footnote "b" below	--	15.8	9.1	Kow Regression Eq., using average TOC
Heptachlor	--	--	--	see footnote "b" below	--	15.5	8.9	Kow Regression Eq., using average TOC
Hexachlorobenzene	--	--	--	see footnote "b" below	--	15.5	8.9	Kow Regression Eq., using average TOC
HMX	--	--	--	see footnote "b" below	--	12.7	7.3	Kow Regression Eq., using average TOC
Iron	0.036	0.078	0.1	--	--	0.078	0.036	Median value from field studies

Table 7-21
Recommended Bioaccumulation/Bioconcentration Factors or Regression Equations Utilized for the Soil-to-Earthworm Pathway

Constituent	Sample, et al.[a]				Beyer [c] BAF/BCF	Recommended Tier 1 (RME) BAF/BCF	Recommended Tier 2 (Average) BAF/BCF	Rationale for Tier 2 (RME) BAF/BCF
	Median BAF/BCF	90th Percentile BAF/BCF	Maximum BAF/BCF	Regression Equation [b]				
Lead	0.266	1.522	228.261	ln (EW)=0.81(ln[soil])-0.21	--d	Regression Equation	Regression Equation	Chemical-specific Regression Eq.
Manganese	0.054	0.124	0.228	ln (EW)=0.68(ln[soil])-0.80	--	Regression Equation	Regression Equation	Chemical-specific Regression Eq.
Mercury	1.693	20.625	33	ln (EW)=0.33(ln[soil])+0.078	--	Regression Equation	Regression Equation	Chemical-specific Regression Eq.
Mirex	--	--	--	see footnote "b" below	--	16.2	9.4	Kow Regression Eq., using average TOC
Nickel	1.059	4.73	7.802	--	--	4.73	1.059	Median value from field studies
Nitrate	--	--	--	--	--	1.14	0.3	Geom. mean of 19 values, see Note (1).
Oxychlordane	--	--	--	see footnote "b" below	--	15.3	8.8	Kow Regression Eq., using average TOC
Pentachloroanisole	--	--	--	see footnote "b" below	--	15.2	8.8	Kow Regression Eq., using average TOC
Pentachlorophenol	--	--	--	see footnote "b" below	--	14.9	8.6	Kow Regression Eq., using average TOC
Perchlorate	--	--	--	--	--	1.14	0.3	Geom. mean of 19 values, see Note (1).
p-Isopropyltoluene	--	--	--	see footnote "b" below	--	14.4	8.3	Kow Regression Eq., using average TOC
Selenium	0.985	1.34	13.733	ln (EW)=0.73(ln[soil])-0.075	--	Regression Equation	Regression Equation	Chemical-specific Regression Eq.
Strontium	0.087	0.278	0.278	--	--	0.278	0.087	Median value from field studies
Sulfate	--	--	--	--	--	1.14	0.3	Geom. mean of 19 values, see Note (1).
trans-Nonachlor	--	--	--	see footnote "b" below	--	15.8	9.1	Kow Regression Eq., using average TOC
Vanadium	0.042	0.088	0.088	--	--	0.088	0.042	Median value from field studies
Zinc	3.201	12.885	49.51	ln (EW)=0.33(ln[soil])+4.44	--	Regression Equation	Regression Equation	Chemical-specific Regression Eq.

Notes:

[a] Sample, B. E, et. al., 1998, Development and Validation of Bioaccumulation Models for Earthworms, ES/ER/TM-220.

[b] For Inorganics: Sample, B.E, et. al., 1999, Literature-Derived Bioaccumulation Models for Earthworms: Development and Validation, Environ. Toxicol. Chem., 18:2,110-2,120.
(models from Table 3 of publication; whichever regression equation [i.e., using model data or model and validation data] was considered more robust [based on r^2 value and p-value] was used.
Neither regression equation is recommended for chromium or nickel). EW = earthworm tissue concentration.
For Organics: Ecological Soil Screening Level (SSL) Guidance, USEPA, 2003 (Section 3.2 in Appendix 4-1, given site-specific soil total organic carbon [TOC]). U.S. Environmental Protection Agency (EPA) 2003, Guidance for Developing Ecological Soil Screening Levels (Eco-SSL), Office of Solid Waste and Emergency Response, OSWER 9285.7-55, November.
The biota/soil water partitioning coefficient of $10^{(logKow-0.6)}$ was replaced with Equation 3 from Jager (1998) of F_{lipid} x Kow. The F_{water} variable of Equation 3 was not included, since it only improves the model fit for extremely hydrophilic compounds (i.e. chemicals with log Kow < 2, approximately).

$$BAF - \frac{Flipid * Kow}{FOC * 10^{(0.983 * logKow + 0.00028)}}$$

Flipid = 0.079 The lipid content in insects was estimated at 3.1 percent fresh weight (Taylor, 1975), which is 7.9 percent of dry weight, using a value of 61 percent water content in beetles (EPA, 1993), calculated as follows: 0.031/(1-0.61) = 0.079, or 7.9 percent.
Kow from http://esc.syrres.com/interkow
Taylor, R. L., 1975, Butterflies in My Stomach, Woodbridge Press Publishing Company, Santa Barbara, California.
The geometric mean (i.e., FOC [Fraction organic carbon] = 0.0064) and the arithmetic mean (i.e., FOC = 0.011) of the total organic carbon (TOC) in LHAAP surface soil samples were used for Tier 1 and Tier 2 calculations, respectively.
Jager, T., 1998, Mechanistic Approach for Estimating Bioconcentration of Organic Chemicals in Earthworms (Oligochaeta), Environmental Toxicology and Chemistry 17: 2080-2090.

[c] Beyer, W. N., 1990. Evaluating Soil Contamination, Biological Report 90(2), U.S. Department of the Interior, U.S. Fish and Wildlife Service.

[d] -- indicates that a BAF/BCF or regression equation is either not available or not recommended.

Table 7-21
Recommended Bioaccumulation/Bioconcentration Factors or Regression Equations Utilized for the Soil-to-Earthworm Pathway

Note (1): For inorganic chemicals without BAF/BCF data, the following data (from Sample et al., 1998) were used to estimate Tier 1 and Tier 2 values:

	90th Percentile BAF/BCF	Median BAF/BCF
Aluminum	0.118	0.043
Arsenic	0.523	0.224
Barium	0.16	0.091
Beryllium	1.182	0.045
Cadmium	40.69	7.708
Chromium	3.162	0.306
Cobalt	0.291	0.122
Copper	1.531	0.515
Iron	0.078	0.036
Lead	1.522	0.266
Manganese	0.124	0.054
Mercury	20.625	1.693
Molybdenum	2.091	0.953
Nickel	4.73	1.059
Selenium	1.34	0.985
Silver	15.338	2.045
Strontium	0.278	0.087
Vanadium	0.088	0.042
Zinc	12.885	3.201
Geometric Mean	1.14	0.30

Table 7-22
Recommended Bioaccumulation/Bioconcentration Factors Utilized for the Soil-to-Small Mammal and Bird Pathways

Constituent	Sample et al., 1998 [a]						Site-Specific Uptake Factors		Recommended	Recommended Tier 2	Rationale for Recommended
	Insectivore Median BAF/BCF	Herbivore Median BAF/BCF	Omnivore Median BAF/BCF	General [b] Median BAF/BCF	General [b] Maximum BAF/BCF	General [b] 90^{th} percentile BAF/BCF	Arithmetic Mean BAF/BCF	Geometric Mean BAF/BCF	Tier 1 (RME) BAF/BCF	(Average) BAF/BCF	Tier 2 BAF/BCF
1,3,5-Trinitrobenzene	--[c]	--	--	--	--	--	--	--	1.15	0.88	Avg. of the geo. mean of site-specific values for organic chemicals; see "d"
1,3-Dinitrobenzene	--	--	--	--	--	--	--	--	1.15	0.88	Avg. of the geo. mean of site-specific values for organic chemicals; see "d"
2,3,7,8-TCDD TEQ	--	1.2857	0.7783	1.07	2.2	2.2	0.06	0.05	0.06	0.05	Geo. Mean of site-specific values
2,4,6-Trinitrotoluene	--	--	--	--	--	--	--	--	1.15	0.88	Avg. of the geo. mean of site-specific values for organic chemicals; see "d"
2,4-Dinitrotoluene	--	--	--	--	--	--	--	--	1.15	0.88	Avg. of the geo. mean of site-specific values for organic chemicals; see "d"
2,6-Dinitrotoluene	--	--	--	--	--	--	--	--	1.15	0.88	Avg. of the geo. mean of site-specific values for organic chemicals; see "d"
4,4'-DDD	--	--	--	--	--	--	--	--	1.15	0.88	Avg. of the geo. mean of site-specific values for organic chemicals; see "d"
4,4'-DDE	--	--	--	--	--	--	0.99	0.94	0.99	0.94	Geo. Mean of site-specific values
4,4'-DDT	--	--	--	--	--	--	1.66	0.89	1.66	0.89	Geo. Mean of site-specific values
Aldrin	--	--	--	--	--	--	--	--	1.15	0.88	Avg. of the geo. mean of site-specific values for organic chemicals; see "d"
alpha-Chlordane	--	--	--	--	--	--	--	--	1.15	0.88	Avg. of the geo. mean of site-specific values for organic chemicals; see "d"
Aluminum	--	--	--	--	--	--	0.009	0.007	0.009	0.007	Geo. Mean of site-specific values
Antimony	--	--	--	--	--	--	--	--	0.166	0.111	Avg. of the Geo. Mean of site-specific values for inorganic chemicals; see "d"
Aroclor - 1242	--	--	--	--	--	--	--	--	1.15	0.88	Avg. of the geo. mean of site-specific values for organic chemicals; see "d"
Aroclor - 1248	--	--	--	--	--	--	--	--	1.15	0.88	Avg. of the geo. mean of site-specific values for organic chemicals; see "d"
Aroclor - 1254	--	--	--	--	--	--	1.06	0.50	1.06	0.50	Geo. Mean of site-specific values
Aroclor - 1260	--	--	--	--	--	--	1.92	1.67	1.92	1.67	Geo. Mean of site-specific values
Aroclor - 1268	--	--	--	--	--	--	--	--	1.15	0.88	Avg. of the geo. mean of site-specific values for organic chemicals; see "d"
Barium	--	0.0615	0.0463	0.0566	0.253	0.1121	0.03	0.02	0.03	0.02	Geo. Mean of site-specific values
Benzoic Acid	--	--	--	--	--	--	--	--	1.15	0.88	Avg. of the geo. mean of site-specific values for organic chemicals; see "d"
Butylbenzyl phthalate	--	--	--	--	--	--	--	--	1.15	0.88	Avg. of the geo. mean of site-specific values for organic chemicals; see "d"
Cadmium	2.105	0.1258	0.1217	0.3333	69.561	3.9905	0.92	0.67	0.92	0.67	Geo. Mean of site-specific values
Chlordane	--	--	--	--	--	--	--	--	1.15	0.88	Avg. of the geo. mean of site-specific values for organic chemicals; see "d"
Chromium	0.0815	0.0884	0.0699	0.0846	0.8	0.3333	--	--	0.3333	0.0846	General median value.
cis-Nonachlor	--	--	--	--	--	--	--	--	1.15	0.88	Avg. of the geo. mean of site-specific values for organic chemicals; see "d"
Copper	0.7714	0.1086	0.1272	0.1963	1.398	1.045	0.15	0.09	0.15	0.09	Geo. Mean of site-specific values
Dieldrin	--	--	--	--	--	--	--	--	1.15	0.88	Avg. of the geo. mean of site-specific values for organic chemicals; see "d"
Endrin	--	--	--	--	--	--	1.22	1.21	1.22	1.21	Geo. Mean of site-specific values
gamma-Chlordane	--	--	--	--	--	--	--	--	1.15	0.88	Avg. of the geo. mean of site-specific values for organic chemicals; see "d"
Heptachlor	--	--	--	--	--	--	--	--	1.15	0.88	Avg. of the geo. mean of site-specific values for organic chemicals; see "d"
Hexachlorobenzene	--	--	--	--	--	--	--	--	1.15	0.88	Avg. of the geo. mean of site-specific values for organic chemicals; see "d"
HMX	--	--	--	--	--	--	--	--	1.15	0.88	Avg. of the geo. mean of site-specific values for organic chemicals; see "d"
Iron	--	0.0126	0.0124	0.0124	0.031	0.0171	0.002	0.002	0.002	0.002	Geo. Mean of site-specific values
Lead	0.1601	0.0522	0.0659	0.1054	2.659	0.2864	0.01	0.01	0.01	0.01	Geo. Mean of site-specific values
Manganese	--	--	--	--	--	--	0.010	0.008	0.010	0.008	Geo. Mean of site-specific values
Mercury	1.046[e]	0.0239[e]	0.0543	0.0543	1.046	0.192	0.10	0.09	0.10	0.09	Geo. Mean of site-specific values
Mirex	--	--	--	--	--	--	--	--	1.15	0.88	Avg. of the geo. mean of site-specific values for organic chemicals; see "d"
Nickel	0.3643	0.0513	0.1683	0.2488	1.143	0.5891	0.10	0.09	0.10	0.09	Geo. Mean of site-specific values
Nitrate	--	--	--	--	--	--	--	--	0.166	0.111	Avg. of the Geo. Mean of site-specific values for inorganic chemicals; see "d"
Oxychlordane	--	--	--	--	--	--	--	--	1.15	0.88	Avg. of the Geo. Mean of site-specific values for inorganic chemicals; see "d"
p-Isopropyltoluene	--	--	--	--	--	--	--	--	1.15	0.88	Avg. of the geo. mean of site-specific values for organic chemicals; see "d"
Pentachloroanisole	--	--	--	--	--	--	--	--	1.15	0.88	Avg. of the geo. mean of site-specific values for organic chemicals; see "d"
Pentachlorophenol	--	--	--	--	--	--	--	--	1.15	0.88	Avg. of the geo. mean of site-specific values for organic chemicals; see "d"
Perchlorate	--	--	--	--	--	--	--	--	0.166	0.111	Avg. of the Geo. Mean of site-specific values for inorganic chemicals; see "d"
Selenium	0.7241	0.0221[f]	0.2062	0.1619	1.754	1.1867	0.19	0.15	0.19	0.15	Geo. Mean of site-specific values
Strontium	--	--	--	--	--	--	--	--	0.166	0.111	Avg. of the Geo. Mean of site-specific values for inorganic chemicals; see "d"
Sulfate	--	--	--	--	--	--	--	--	0.166	0.111	Avg. of the Geo. Mean of site-specific values for inorganic chemicals; see "d"
trans-Nonachlor	--	--	--	--	--	--	--	--	1.15	0.88	Avg. of the geo. mean of site-specific values for organic chemicals; see "d"
Vanadium	--	--	--	--	--	--	0.006	0.005	0.006	0.005	Geo. Mean of site-specific values
Zinc	0.83277	0.50429	0.55772	0.7717	16.364	2.6878	0.45	0.18	0.45	0.18	Geo. Mean of site-specific values

Notes:

1 Bird BAF/BCF values were based on the recommended small mammal BAF/BCF values, as bird uptake values are not readily available.

[a] Sample et al., 1998, *Development and Validation of Bioaccumulation Models for Small Mammals,* ES/ER/TM-219.

[b] "General" indicates that the combination dataset used for insectivore, herbivore, and omnivore receptors was used to estimate a "general" receptor BAF/BCF value.

[c] -- indicates that a BAF/BCF is not available.

[d] The mean of all site-specific average and geometric mean BAF/BCFs for inorganic chemicals were used as the default Tier 1 and Tier 2 values, respectively, for inorganic chemicals for which site-specific uptake factors could not be developed.
A similar approach was used for organic chemicals that lacked site-specific uptake factors.

[e] Only one BAF/BCF value available for exposure to mercury in soil (median is also 90th percentile value and maximum value).

[f] Mean value presented, as median value not given in Sample et al. (1998).

Table 7-23
Recommended Bioaccumulation/Bioconcentration Factors Utilized for the Sediment-to-Aquatic Invertebrate Pathway

Constituent	Bechtel Jacobs [a] Median BAF/BCF	Bechtel Jacobs [a] 90th Percentile BAF/BCF	Bechtel Jacobs [a] Maximum BAF/BCF	EPA 1999 [b] BAF/BCF	Other [c] BAF/BCF	Recommended [d] Tier 1 (RME) BAF/BCF	Recommended [e] Tier 2 (Median) BAF/BCF	Rationale for Recommended Tier 2 BAF/BCF
2,3,7,8-TCDD TEQ	--	--	--	--	--	21.886	4.67	Conservative default
4,4'-DDD	-- [f]	--	--	--	0.42 [1]	0.42	0.42	Mean sediment BSAF (Oliver and Niimi, 1988)
4,4'-DDT	--	--	--	--	1.68 [1]	1.68	1.68	Mean sediment BSAF (Oliver and Niimi, 1988)
Aluminum	--	--	--	4.5 [g]	--	4.5	4.5	EPA, 1999
Aroclor 1254	4.67	21.886	51.313	4.77	--	21.886	4.67	Median Bechtel Jacobs sediment BAF/BCF
Barium	--	--	--	4.5 [g]	--	4.5	4.5	EPA, 1999
bis(2-ethylhexyl)phthalate	--	--	--	--	--	21.886	4.67	Conservative default
Cadmium	0.6	7.99	41.55	17	--	7.99	0.6	Median Bechtel Jacobs sediment BAF/BCF
Chloride	--	--	--	--	--	2.1	0.42	Geometric mean of medians (Bechtel Jacobs, 1998)
Copper	1.56	5.25	23.87	1.5	--	5.25	1.56	Median Bechtel Jacobs sediment BAF/BCF
Dieldrin	--	--	--	--	5.8 [2]	5.80	5.80	Median sediment BAF/BCF (Standley, 1997)
Isobutanol	--	--	--	--	--	21.886	4.67	Conservative default
Lead	0.071	0.607	7.08	3.15	--	0.607	0.071	Median Bechtel Jacobs sediment BAF/BCF
Manganese	--	--	--	--	--	2.1	0.42	Geometric mean of medians (Bechtel Jacobs, 1998)
Mercury	1.136	2.868	3.981	0.34	--	2.868	1.136	Median Bechtel Jacobs sediment BAF/BCF
Nickel	0.486	2.32	5.746	4.5 [g]	--	2.32	0.486	Median Bechtel Jacobs sediment BAF/BCF
Nitrate	--	--	--	--	--	2.1	0.42	Geometric mean of medians (Bechtel Jacobs, 1998)
Selenium	--	--	--	4.5 [g]	--	4.5	4.5	EPA, 1999
Silver	--	--	--	4.5 [g]	--	4.5	4.5	EPA, 1999
Sulfate	--	--	--	--	--	2.1	0.42	Geometric mean of medians (Bechtel Jacobs, 1998)
Thallium	--	--	--	4.5 [g]	--	4.5	4.5	EPA, 1999
Vanadium	--	--	--	--	--	2.1	0.42	Geometric mean of medians (Bechtel Jacobs, 1998)
Zinc	1.936	7.527	14.512	2.85	--	7.527	1.936	Median Bechtel Jacobs sediment BAF/BCF

Notes:
1 All BAF/BCF values for infauna, unless noted.
2 Geometric means for 90th percentile and median inorganic BAF/BCFs were calculated using the data provided below from Bechtel (1998):

	90th Percentile	Median
Arsenic	0.69	0.143
Cadmium	7.99	0.6
Chromium	0.468	0.1
Copper	5.25	1.556
Mercury	2.868	1.136
Nickel	2.32	0.486
Lead	0.607	0.071
Zinc	7.527	1.936
Geom. Mean	2.1	0.42

[a] Bechtel Jacobs Company LLC, 1998, *Biota Sediment Accumulation Factors for Invertebrates: Review and Recommendations for the Oak Ridge Reservation*, BJC/OR-112. (Depurated and nondepurated results used).

[b] USEPA, 1999, *Screening Level Ecological Risk Assessment Protocol for Hazardous Waste Combustion Facilities*, EPA530-D-99-001A (Peer Review Draft). Only values based on empirical studies were used. Values were reported on a wet weight basis. Moisture content for benthic invertebrates is assumed to be 80% (Sample and Suter, 1994). Therefore, values were multiplied by 5 to convert to a dry-weight basis.

[c] Other BAFs/BCFs are taken from the following sources:
[1] Oliver, B. G., and A. J. Niimi, 1988, "Trophodynamic analysis of polychlorinated biphenyl congeners and other chlorinated hydrocarbons in the Lake Ontario ecosystem", Environmental Science and Technology, 22: 388 - 397. (Mean BSAF for all benthic invertebrate species; values converted from wet weight to dry weight assuming moisture content of aquatic worms = 83.3%)
[2] Standley, L. J., 1997, "Effect of sedementary organic matter composition on the partitioning and bioavailability of dieldrin to the oligochaete *Lumbriculus variegatus*", Environmental Science and Technology, 31: 2577 - 2583. (Geometric mean)

[d] The recommended Tier 1 BAF/BCF is selected as the 90th percentile value from Bechtel Jacobs (1998). If no BAF/BCF was located for a constituent, a default of 21.886 (90th percentile for Aroclor 1254 from Bechtel Jacobs [1998]) was conservatively assumed for organics, and the geometric mean of the 90th percentile for available inorganic values (i.e., 2.1; see Note 2) was used as the RME surrogate for the inorganics.

[e] The Tier 2 BAF/BCF is selected as the median value from Bechtel Jacobs (1998). If no BAF/BCF was located for a constituent, a default of 4.67 (median for Aroclor 1254 from Bechtel Jacobs [1998]) was conservatively assumed for organics, and the geometric mean of available median inorganic values (i.e., 0.42; see Note 2) was used as the median surrogate for inorganics.

[f] -- indicates that a BAF/BCF is not available.

[g] Value based on the average of six BCFs for other inorganic chemicals.

[h] Aroclor 1016 and 1254 values used as a surrogate.

Table 7-24
Recommended Bioaccumulation/Bioconcentration Factors Utilized for the Water-to-Fish Pathway

Constituent	IAEA [a] (Recommended Value and Range)	Bintein and Devillers [b]	EPA 1999 [c]	EPA 1989 [d]	RAIS [e]	Recommended Tier 1 (RME) BAF/BCF	Recommended Tier 2 (Average) BAF/BCF	Rationale for Recommended Tier 2 BAF/BCF
2,3,7,8-TCDD TEQ [f]	-- [g]	38,399	7,768	--	170,000	170,000	23,084	Mean of two lower values
4,4'-DDD	--	80,270	--	--	43,000	80,270	43,000	Lower of the two values available
4,4'-DDT	--	47,747	--	--	210,000	210,000	47,747	Lower of the two values available
Acetone	--	0.5	--	--	16	16	0.5	Lower of the two values available
Aluminum	--	--	4.3	--	NA	4.3	4.3	Only value available
Aroclor 1254	--	34,452	386,359	--	700,000	700,000	210,406	Mean of two lower values
Barium	20 (20-1,000)	--	1,006	--	NA	1,006	20	Lower recommended value
Bis(2-ethylhexyl)phthalate	--	1,423	7	--	1,550	1,550	715	Mean of two lower values
Cadmium	--	--	1,148	1,630	NA	1,630	1,148	Lower of the two values available
Carbon Disulfide	--	47.7	--	--	31	47.7	31	Lower of the two values available
Chloride	--	--	--	--	NA	1,068	301	Geometric mean of inorganics used [h]
Chromium	1,000 (200-10,000)	--	19	700 [i]	NA	1,000	360	Mean of two lower values
Copper	1,000 (25-10,000)	--	1,222	5,915	NA	5,915	1,111	Mean of two lower values
Dieldrin	--	52,732	--	--	10,000	52,732	10,000	Lower of the two values available
Iron	1,000 (250-10,000)	--	--	--	NA	1,000	250	Lowest value in recommended range
Isobutanol	--	4	--	--	16	16	4	Lower of the two values available
Isopropylbenzene	--	1,124	--	--	650	1,124	650	Lower of the two values available
Lead	1,500 (500-1,500)	--	0.08	895	NA	1,500	448	Mean of two lower values
Manganese	2,000 (250-2,500)	--	--	--	NA	2,000	250	Lowest value in recommended range
Mercury	5,000	--	18,075	500	NA	18,075	2,750	Mean of two lower values
Nickel	500	--	168	250	NA	500	209	Mean of two lower values
Nitrate	--	--	--	--	NA	1,068	301	Geometric mean of inorganics used [h]
Nitrate/Nitrite	--	--	--	--	NA	1,068	301	Geometric mean of inorganics used [h]
p-Cymene	--	3,525	--	--	NA	3,525	3,525	Only value available
Selenium	--	--	205	--	NA	205	205	Only value available
Silver	25 (1-50)	--	136	--	NA	136	25	Lower recommended value
Sulfate	--	--	--	--	NA	1,068	301	Geometric mean of inorganics used [h]
Thallium	--	--	15,900	75	NA	15,900	75	Lower of the two values available
Vanadium	--	--	--	--	NA	1,068	301	Geometric mean of inorganics used [h]
Zinc	5,000 (500-15,000)	--	2,931	2,890	NA	5,000	2,911	Mean of two lower values

Notes:

Organic BCFs converted from $BCF_{Dissolved}$ to BCF_{Total} using equation C-1-7 in EPA (1999). BCFs for metals were adjusted for total water concentrations using the following information (From Table 7 in TCEQ, 2003, *Procedures to Implement the Texas Surface Water Quality Standards* [RG-194], January):

[a] International Atomic Energy Agency (IAEA), 1994, *Handbook of Parameter Values for the Protection of Radionuclide Transfer in Temperate Environments*, Technical Reports Series No. 364. Values assumed to be in wet weight. BCFs multiplied by 5 (fish moisture content = 80%) to convert to dry weigh

[b] Bintein, S. and J. Devillers, 1993, *Nonlinear Dependence of Fish Bioconcentration on n-Octanol/'Water Partition Coefficient,* in SAR and QSAR in Environmental Research, Vol. 1, pp. 29-39, Gordon and Branch Science Publishers.
The following recommended regression equation from the reference was used, along with log Kow values from http://esc.syrres.com/interkow

$$\log BCF = 0.910 \log Kow - 1.975 \log (6.8\ 10^{7}\ Kow + 1) - 0.786$$

Values assumed to be in wet weight. BCFs multiplied by 5 (fish moisture content = 80%) to convert to dry weight

[c] USEPA, 1999, *Screening Level Ecological Risk Assessment Protocol for Hazardous Waste Combustion Facilities, EPA530-D-99-001A (Peer Review Draft),* Appendix C - Media-to-Receptor BCFs (water to fish). BCFs are ([mg COPC/kg wet tissue] / [mg dissolved COPC / L water]). Wet weight BCFs converted to dry weight BCFs by multiplying by 5 (fish moisture content = 80%

Table 7-24
Recommended Bioaccumulation/Bioconcentration Factors Utilized for the Water-to-Fish Pathway

Metal	Stream Intercept (b)	TSS (mg/L)	C_d/C_t	
Arsenic	5.68	10	0.529	
Cadmium	6.6	10	0.253	
Chromium	6.52	10	0.204	
Copper	6.02	10	0.344	
Lead	6.45	10	0.183	
Mercury	6.46	10	0.324	
Nickel	5.69	10	0.431	
Silver	6.38	10	0.309	
Zinc	6.1	10	0.285	
			0.318	= Arithmetic mean

Total suspended solids (TSS) estimate from EPA, 1999

$Kp = 10^b \times TSS^m$, with slope and intercept values b and m from Table 7 in TCEQ, 2003.

Dissolved Conc (C_d)/Total Conc (C_t) = (1+(Kp*TSS*1E-6)))

The arithmetic mean of C_d/C_t was used for inorganic chemicals not included in the above table.

[d] EPA, 1989, Assessing Human Health Risks from Contaminated Fish and Shellfish: A Guidance Manual, EPA-503/8-89-002. Values assumed to be in wet weight. BCFs multiplied by 5 (fish moisture content = 80%) to convert to dry weight

[e] BCF from Oak Ridge National Laboratory's Risk Assessment Information System (RAIS) website (http://risk.lsd.ornl.gov/cgi-bin/tox/TOX_select?select=csf). Because the RAIS uses log Kow model to estimate BCFs, this is only a potential source of BCFs for organic chemicals Values assumed to be in wet weight. BCFs multiplied by 5 (fish moisture content = 80%) to convert to dry weight

[f] Values for 2,3,7,8-TCDD

[g] -- indicates that a BAF/BCF is not available.

[h] No BCFs were available. The geometric means of the Tier 1 and Tier 2 inorganic BAF/BCF values presented in this table were used.

[i] Average of Chromium +3 (127) and Chromium +6 (155).

Table 7-25
NOAEL-Based and LOAEL-Based Toxicity Reference Values for Mammals and Birds

Chemical	Surrogate?	Test Species	Study Effect	Study Endpoint	Study Endpoint Concentration	Units	Uncertainty Factor	Toxicity Reference Value (mg/kg/day)	TRV Endpoint	Reference
Mammal NOAELs										
1,3,5-Trinitrobenzene		rat	body weight	NOAEL	4	mg/kg/day	NA	2.68	NOAEL	USACHPPM, 2001a
1,3-Dinitrobenzene		rat	reproduction	sub-chronic NOAEL	8	ppm	0.1	0.113	NOAEL	Talmage et al., 1999
2,3,7,8-TCDD TE		rat	reproduction	NOAEL	0.000001	mg/kg/day	NA	0.000001	NOAEL	Sample et al., 1996
Dioxins (geometric mean)								0.000001	NOAEL	
2,4,6-Trinitrotoluene		dog	blood chemistry, body weight	NOAEL	2	mg/kg/day	NA	0.2	NOAEL	USACHPPM, 2000
2,4-Dinitrotoluene		dog	neurotoxicity, Heinz bodied, and biliary tract hyperplasia	NOAEL	0.2	mg/kg/day	NA	0.2	NOAEL	IRIS, 2004
2,6-Dinitrotoluene	2,4,6-Trinitrotoluene	dog	blood chemistry, body weight	NOAEL	2	mg/kg/day	NA	0.2	NOAEL	USACHPPM, 2000
4,4'-DDD	4,4-DDT	rat	reproduction	NOAEL	10	ppm	NA	0.8	NOAEL	Sample et al., 1996
4,4'-DDE	4,4'DDT	rat	reproduction	NOAEL	10	ppm	NA	0.8	NOAEL	Sample et al., 1996
4,4'-DDT		rat	reproduction	NOAEL	10	ppm	NA	0.8	NOAEL	Sample et al., 1996
Aldrin		rat	reproduction	NOAEL	2.5	ppm	NA	0.2	NOAEL	Sample et al., 1996
alpha-Chlordane	Chlordane	mouse	reproduction	NOAEL	25	ppm	NA	4.58	NOAEL	Sample et al., 1996
Aluminum		mouse	reproduction	LOAEL	19.3	mg/kg/day	0.1	1.93	NOAEL	Sample et al., 1996
Antimony		mouse	lifespan, longevity	LOAEL	5	ppm	0.1	0.125	NOAEL	Sample et al., 1996
Aroclor - 1242		mink	reproduction	LOAEL	5	ppm	0.1	0.0685	NOAEL	Sample et al., 1996
Aroclor - 1248	Aroclor 1254	oldfield mouse	reproduction	LOAEL	5	ppm	0.1	0.068	NOAEL	Sample et al., 1996
Aroclor - 1254		oldfield mouse	reproduction	LOAEL	5	ppm	0.1	0.068	NOAEL	Sample et al., 1996
Aroclor - 1260	Aroclor 1254	oldfield mouse	reproduction	LOAEL	5	ppm	0.1	0.068	NOAEL	Sample et al., 1996
Aroclor - 1268	Aroclor 1254	oldfield mouse	reproduction	LOAEL	5	ppm	0.1	0.068	NOAEL	Sample et al., 1996
Barium		rat	growth/hypertension	NOAEL	100	ppm	NA	5.1	NOAEL	Sample et al., 1996
Benzoic Acid		mouse	reproduction/development	LOAEL	unk		0.1	4	NOAEL	IT, 1997
Bis(2-ethylhexyl)phthalate		mouse	reproduction	NOAEL	100	ppm	NA	18.33	NOAEL	Sample et al., 1996
Butylbenzyl phthalate		rat	liver-to-body weight and brain-to-body weight	sub-chronic NOAEL	2800	ppm	0.1	15.9	NOAEL	IRIS, 2004
Cadmium		rat	reproduction	NOAEL	1	mg/kg/day	NA	1	NOAEL	Sample et al., 1996
Chlordane		mouse	reproduction	NOAEL	25	ppm	NA	4.58	NOAEL	Sample et al., 1996
Chloride										
Chromium (hexavalent)		rat	weight/food consumption	NOAEL	25	ppm	NA	3.28	NOAEL	Sample et al., 1996
Chromium (trivalent)		rat	reproduction/longevity	NOAEL	50000	ppm	NA	2737	NOAEL	Sample et al., 1996
cis-Nonachlor	Chlordane	mouse	reproduction	NOAEL	25	ppm	NA	4.58	NOAEL	Sample et al., 1996
Copper		mink	reproduction	NOAEL	85.5	ppm	NA	11.7	NOAEL	Sample et al., 1996
Dieldrin		rat	reproduction	LOAEL	2.5	ppm	0.1	0.02	NOAEL	Sample et al., 1996
Endrin		mouse	reproduction	LOAEL	5	ppm	0.1	0.092	NOAEL	Sample et al., 1996
gamma-Chlordane	Chlordane	mouse	reproduction	NOAEL	25	ppm	NA	4.58	NOAEL	Sample et al., 1996
Heptachlor		mink	reproduction	LOAEL	6.25	ppm	0.1	0.1	NOAEL	Sample et al., 1996
Hexachlorobenzene		rat	liver effects	NOAEL	1.6	ppm	NA	0.08	NOAEL	IRIS, 2004
HMX		rabbit	acute effects	LOAEL	100	mg/kg/day	0.5	1	NOAEL	USACHPPM, 2001b
Iron										
Isobutanol										
Lead		rat	reproduction	NOAEL	100	ppm	NA	8	NOAEL	Sample et al., 1996
Manganese		rat	reproduction	NOAEL	1100	ppm	NA	88	NOAEL	Sample et al., 1996
Mercury		mouse	mortality, liver & kidney histology, reproduction	NOAEL	13.2	mg/kg/day	NA	13.2	NOAEL	Sample et al., 1996
Mercury		mink	reproduction	NOAEL	7.39	ppm	NA	1	NOAEL	Sample et al., 1996
Mercury (methyl)		mink	mortality, weight loss, ataxia	NOAEL	1.1	ppm	0.1	0.015	NOAEL	Sample et al., 1996
Mercury (methyl)		rat	reproduction	NOAEL	0.399	ppm	NA	0.032	NOAEL	Sample et al., 1996
Mirex		rat	body weight & survival	NOAEL	1	ppm	NA	0.07	NOAEL	IRIS, 2004
Nickel		rat	reproduction	NOAEL	500	ppm	NA	40	NOAEL	Sample et al., 1996
Nitrate		guinea pig	reproduction	NOAEL	507	mg/kg/day	NA	507	NOAEL	Sample et al., 1996
Nitrate/Nitrite	Nitrate	guinea pig	reproduction	NOAEL	507	mg/kg/day	NA	507	NOAEL	Sample et al., 1996
Oxychlordane	Chlordane	mouse	reproduction	NOAEL	25	ppm	NA	4.58	NOAEL	Sample et al., 1996
p-Isopropyltoluene	Xylene (total)	mouse	reproduction	NOAEL	unk		NA	2.1	NOAEL	Sample et al., 1996
Pentachloro-anisole	Pentachlorophenol	rat	reproduction	NOAEL	3	ppm	NA	0.24	NOAEL	Sample et al., 1996
Pentachlorophenol		rat	reproduction	NOAEL	3	ppm	NA	0.24	NOAEL	Sample et al., 1996
Perchlorate		rat	developmental tox/ delayed ossification	NOAEL	0.85	mg/kg/day	NA	0.85	NOAEL	York et al., 2003
Selenium		rat	reproduction	NOAEL	1.5	mg/L	NA	0.2	NOAEL	Sample et al., 1996
Silver		rat	body weight	NOAEL	unk		NA	19	NOAEL	LANL, 2005
Strontium		rat	body weight, bone changes	NOAEL	263	mg/kg/day	NA	263	NOAEL	Sample et al., 1996
Sulfate										
2,3,4,7,8-PeDBF				NOAEL	0.002	ppb	0.1	0.000016	NOAEL	Sample et al., 1996
1,2,3,6,7,8-HxDBF		rat	body weight, organ weight, blood chemistry	NOAEL	0.02	ppb	0.1	0.00016	NOAEL	Sample et al., 1996
1,2,3,7,8-PeDBF		rat	body weight, organ weight, blood chemistry	NOAEL	0.02	ppb	0.1	0.00016	NOAEL	Sample et al., 1996
Furans (geometric mean)								7.42654E-05	NOAEL	
Thallium		rat	reproduction	LOAEL	10	ppm	0.01	0.0074	NOAEL	Sample et al., 1996
trans-Nonachlor	Chlordane	mouse	reproduction	NOAEL	25	ppm	NA	4.58	NOAEL	Sample et al., 1996
Vanadium		rat	reproduction	LOAEL	5	mg/kg/day	0.1	0.21	NOAEL	Sample et al., 1996
Zinc		rat	reproduction	NOAEL	2000	ppm	NA	160	NOAEL	Sample et al., 1996

Table 7-25
NOAEL-Based and LOAEL-Based Toxicity Reference Values for Mammals and Birds

Chemical	Surrogate?	Test Species	Study Effect	Study Endpoint	Study Endpoint Concentration	Units	Uncertainty Factor	Toxicity Reference Value (mg/kg/day)	TRV Endpoint	Reference
Mammal LOAELs										
1,3,5-Trinitrobenzene		rat	body weight	LOAEL	23	mg/kg/day	NA	13.31	LOAEL	USACHPPM, 2001a
1,3-Dinitrobenzene		rat	reproduction	LOAEL	20	ppm	0.1	0.264	NOAEL	Talmage et al., 1999
2,3,7,8-TCDD TE		rat	reproduction	LOAEL	0.00001	mg/kg/day	NA	0.00001	LOAEL	Sample et al., 1996
Dioxins (geometric mean)								0.00001	LOAEL	
2,4,6-Trinitrotoluene		dog	blood chemistry, body weight	LOAEL	8	mg/kg/day	NA	0.3	LOAEL	USACHPPM, 2000
2,4-Dinitrotoluene		dog	neurotoxicity, Heinz bodied, and biliary tract hyperplasia	LOAEL	1.5	mg/kg/day	NA	1.5	LOAEL	IRIS, 2004
2,6-Dinitrotoluene	2,4,6-Trinitrotoluene	dog	blood chemistry, body weight	NOAEL	2	mg/kg/day	3	0.6	LOAEL	USACHPPM, 2000
4,4'-DDD	4,4-DDT	rat	reproduction	LOAEL	50	ppm	NA	4	LOAEL	Sample et al., 1996
4,4'-DDE	4,4-DDT	rat	reproduction	LOAEL	50	ppm	NA	4	LOAEL	Sample et al., 1996
4,4'-DDT		rat	reproduction	LOAEL	50	ppm	NA	4	LOAEL	Sample et al., 1996
Aldrin		rat	reproduction	LOAEL	12.5	ppm	NA	1	LOAEL	Sample et al., 1996
alpha-Chlordane	Chlordane	mouse	reproduction	LOAEL	50	ppm	NA	9.16	LOAEL	Sample et al., 1996
Aluminum		mouse	reproduction	LOAEL	19.3	mg/kg/day	NA	19.3	LOAEL	Sample et al., 1996
Antimony		mouse	lifespan, longevity	LOAEL	5	ppm	NA	1.25	LOAEL	Sample et al., 1996
Aroclor - 1242		mink	reproduction	LOAEL	5	ppm	NA	0.685	LOAEL	Sample et al., 1996
Aroclor - 1248	Aroclor 1254	oldfield mouse	reproduction	LOAEL	5	ppm	NA	0.68	LOAEL	Sample et al., 1996
Aroclor - 1248	Aroclor 1254	mink	reproduction	LOAEL	5	ppm	NA	0.69	LOAEL	Sample et al., 1996
Aroclor - 1254		oldfield mouse	reproduction	LOAEL	5	ppm	NA	0.68	LOAEL	Sample et al., 1996
Aroclor - 1254		mink	reproduction	LOAEL	5	ppm	NA	0.69	LOAEL	Sample et al., 1996
Aroclor - 1260	Aroclor 1254	oldfield mouse	reproduction	LOAEL	5	ppm	NA	0.68	LOAEL	Sample et al., 1996
Aroclor - 1260	Aroclor 1254	mink	reproduction	LOAEL	5	ppm	NA	0.69	LOAEL	Sample et al., 1996
Aroclor - 1268	Aroclor 1254	oldfield mouse	reproduction	LOAEL	5	ppm	NA	0.68	LOAEL	Sample et al., 1996
Aroclor - 1268	Aroclor 1254	mink	reproduction	LOAEL	5	ppm	NA	0.69	LOAEL	Sample et al., 1996
Barium		rat	mortality	LOAEL	300	ppm	0.1	19.8	LOAEL	Sample et al., 1996
Benzoic Acid		mouse	reproduction/development	LOAEL	unk		NA	40	LOAEL	IT, 1997
bis(2-Ethylhexyl)phthalate		mouse	reproduction	LOAEL	1000	ppm	NA	183	LOAEL	Sample et al., 1996
Butylbenzyl phthalate		rat	liver-to-body weight and brain-to-body weight	LOAEL	8300	ppm	0.1	47	LOAEL	IRIS, 2004
Cadmium		rat	reproduction	LOAEL	10	mg/kg/day	NA	10	LOAEL	Sample et al., 1996
Chlordane		mouse	reproduction	LOAEL	50	ppm	NA	9.16	LOAEL	Sample et al., 1996
Chloride										
Chromium (hexavalent)		rat	mortality	LOAEL	1000	ppm	0.1	13.14	LOAEL	Sample et al., 1996
Chromium (trivalent)		rat	reproduction/longevity	NOAEL	50,000	ppm	10	27370	LOAEL	Sample et al., 1996
cis-Nonachlor	Chlordane	mouse	reproduction	LOAEL	50	ppm	NA	9.16	LOAEL	Sample et al., 1996
Copper		mink	reproduction	LOAEL	111	ppm	NA	15.14	LOAEL	Sample et al., 1996
Dieldrin		rat	reproduction	LOAEL	2.5	ppm	NA	0.2	LOAEL	Sample et al., 1996
Endrin		mouse	reproduction	LOAEL	5	ppm	NA	0.92	LOAEL	Sample et al., 1996
gamma-Chlordane	Chlordane	mouse	reproduction	LOAEL	50	ppm	NA	9.16	LOAEL	Sample et al., 1996
Heptachlor		mink	reproduction	LOAEL	6.25	ppm	NA	1	LOAEL	Sample et al., 1996
Hexachlorobenzene		rat	liver effects	LOAEL	8	ppm	NA	0.29	LOAEL	IRIS, 2004
HMX		rabbit	acute effects	LOAEL	250	mg/kg/day	0.1	5	LOAEL	USACHPPM, 2001b
Iron										
Isobutanol										
Lead		rat	reproduction	LOAEL	1000	ppm	NA	80	LOAEL	Sample et al., 1996
Manganese		rat	reproduction	LOAEL	3550	ppm	NA	284	LOAEL	Sample et al., 1996
Mercury		mouse	mortality, liver & kidney histology, reproduction	NOAEL	13.2	mg/kg/day	3	39.6	LOAEL	Sample et al., 1996
Mercury		mink	reproduction	NOAEL	7.39	ppm	3	3	LOAEL	Sample et al., 1996
Mercury (methyl)		mink	mortality, weight loss, ataxia	LOAEL	1.8	ppm	0.1	0.025	LOAEL	Sample et al., 1996
Mercury (methyl)		rat	reproduction	LOAEL	2	ppm	NA	0.16	LOAEL	Sample et al., 1996
Mirex		rat	body weight & survival	LOAEL	10	ppm	NA	0.7	LOAEL	IRIS, 2004
Nickel		rat	reproduction	LOAEL	1000	ppm	NA	80	LOAEL	Sample et al., 1996
Nitrate		guinea pig	reproduction	LOAEL	1130	mg/kg/day	NA	1130	LOAEL	Sample et al., 1996
Nitrate/Nitrite	Nitrate	guinea pig	reproduction	LOAEL	1130	mg/kg/day	NA	1130	LOAEL	Sample et al., 1996
Oxychlordane	Chlordane	mouse	reproduction	LOAEL	50	ppm	NA	9.16	LOAEL	Sample et al., 1996
p-Isopropyltoluene	Xylene (total)	mouse	reproduction	NOAEL	unk		3	6.3	LOAEL	Sample et al., 1996
Pentachloro-anisole	Pentachlorophenol	rat	reproduction	LOAEL	30	ppm	NA	2.4	LOAEL	Sample et al., 1996
Pentachlorophenol		rat	reproduction	LOAEL	30	ppm	NA	2.4	LOAEL	Sample et al., 1996
Perchlorate		rat	neurobehavioral effects	LOAEL	8.5	mg/kg/day	NA	8.5	LOAEL	York et al., 2004
Selenium		rat	reproduction	LOAEL	2.5	mg/L	NA	0.33	LOAEL	Sample et al., 1996
Silver		rat	body weight	NOAEL	unk		3	57	NOAEL	LANL, 2005
Strontium		rat	body weight, bone changes	NOAEL	263	mg/kg/day	3	789	LOAEL	Sample et al., 1996
Sulfate										
2,3,4,7,8-PeDBF		rat	body weight, organ weight, blood chemistry	LOAEL	0.02	ppb	0.1	0.00016	LOAEL	Sample et al., 1996
1,2,3,6,7,8-HxDBF		rat	body weight, organ weight, blood chemistry	LOAEL	0.2	ppb	0.1	0.0016	LOAEL	Sample et al., 1996
1,2,3,7,8-PeDBF		rat	body weight, organ weight, blood chemistry	LOAEL	0.2	ppb	0.1	0.0016	LOAEL	Sample et al., 1996
Furans (geometric mean)								0.000742654	LOAEL	
Thallium		rat	reproduction	LOAEL	10	ppm	0.1	0.074	LOAEL	Sample et al., 1996
trans-Nonachlor	Chlordane	mouse	reproduction	LOAEL	50	ppm	NA	9.16	LOAEL	Sample et al., 1996
Vanadium		rat	reproduction	LOAEL	5	mg/kg/day	NA	2.1	LOAEL	Sample et al., 1996
Zinc		rat	reproduction	LOAEL	4000	ppm	NA	320	LOAEL	Sample et al., 1996

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Table 7-25
NOAEL-Based and LOAEL-Based Toxicity Reference Values for
Mammals and Birds

Chemical	Surrogate?	Test Species	Study Effect	Study Endpoint	Study Endpoint Concentration	Units	Uncertainty Factor	Toxicity Reference Value (mg/kg/day)	TRV Endpoint	Reference
Bird NOAELs										
1,3,5-Trinitrobenzene										
1,3-Dinitrobenzene		red-winged blackbird	mortality	LD50	unk		0.01	0.422	NOAEL	EPA, 1999
2,3,7,8-TCDD TE		ring-necked pheasant	reproduction	NOAEL	0.000014	mg/kg/d	NA	0.000014	NOAEL	Sample et al., 1996
Dioxins (geometric mean)								0.000014	NOAEL	
2,4,6-Trinitrotoluene		northern bobwhite quail	hematological effects, organ & immune effects	NOAEL	160	ppm	0.01	0.07	NOAEL	USACHPPM, 2000
2,4-Dinitrotoluene										
2,6-Dinitrotoluene										
4,4'-DDD	4,4'-DDT	brown pelican	reproduction	LOAEL	0.15	ppm	0.1	0.0028	NOAEL	Sample et al., 1996
4,4'-DDE	4,4'-DDT	brown pelican	reproduction	LOAEL	0.15	ppm	0.1	0.058	NOAEL	EPA, 1993
4,4'-DDT		brown pelican	reproduction	LOAEL	0.15	ppm	0.1	0.0028	NOAEL	Sample et al., 1996
Aldrin										
alpha-Chlordane	Chlordane	red-winged blackbird	mortality	NOAEL	10	ppm	NA	2.14	NOAEL	Sample et al., 1996
Aluminum		ringed dove	reproduction	NOAEL	1000	ppm	NA	109.7	NOAEL	Sample et al., 1996
Antimony										
Aroclor - 1242		screech owl	reproduction	NOAEL	3	ppm	NA	0.41	NOAEL	Sample et al., 1996
Aroclor - 1248	Aroclor 1254	ring-necked pheasant	reproduction	LOAEL	1.8	mg/kg/d	0.1	0.18	NOAEL	Sample et al., 1996
Aroclor - 1254		ring-necked pheasant	reproduction	LOAEL	1.8	mg/kg/d	0.1	0.18	NOAEL	Sample et al., 1996
Aroclor - 1260	Aroclor 1254	ring-necked pheasant	reproduction	LOAEL	1.8	mg/kg/d	0.1	0.18	NOAEL	Sample et al., 1996
Aroclor - 1268	Aroclor 1254	ring-necked pheasant	reproduction	LOAEL	1.8	mg/kg/d	0.1	0.18	NOAEL	Sample et al., 1996
Barium		chick	mortality	NOAEL	2000	ppm	0.1	20.8	NOAEL	Sample et al., 1996
Benzoic Acid										
Bis(2-ethylhexyl)phthalate		ringed dove	reproduction	NOAEL	10	ppm	NA	1.11	NOAEL	Sample et al., 1996
Butylbenzyl phthalate										
Cadmium		mallard duck	reproduction	NOAEL	15.2	ppm	NA	1.45	NOAEL	Sample et al., 1996
Chlordane		red-winged blackbird	mortality	NOAEL	10	ppm	NA	2.14	NOAEL	Sample et al., 1996
Chloride										
Chromium (trivalent)		black duck	reproduction	NOAEL	10	ppm	NA	1	NOAEL	Sample et al., 1996
cis-Nonachlor	Chlordane	red-winged blackbird	mortality	NOAEL	10	ppm	NA	2.14	NOAEL	Sample et al., 1996
Copper		chicks	growth, mortality	NOAEL	570	ppm	NA	47	NOAEL	Sample et al., 1996
Dieldrin		barn owl	reproduction	NOAEL	0.58	ppm	NA	0.077	NOAEL	Sample et al., 1996
Endrin		screech owl	reproduction	LOAEL	0.75	ppm	0.1	0.01	NOAEL	Sample et al., 1996
Endrin		mallard duck	reproduction	NOAEL	3	ppm	NA	0.3	NOAEL	Sample et al., 1996
gamma-Chlordane	Chlordane	red-winged blackbird	mortality	NOAEL	10	ppm	NA	2.14	NOAEL	Sample et al., 1996
Heptachlor		quail	mortality	LC50	unk		0.01	0.92	NOAEL	PRC, 1998
Hexachlorobenzene										
HMX										
Iron										
Isobutanol										
Lead		American kestrel	reproduction	NOAEL	50	ppm	NA	3.85	NOAEL	Sample et al., 1996
Lead		Japanese quail	reproduction	NOAEL	10	ppm	NA	1.13	NOAEL	Sample et al., 1996
Manganese		Japanese quail	growth, aggressive behavior	NOAEL	977	mg/kg/d	NA	977	NOAEL	Sample et al., 1996
Mercury		Japanese quail	reproduction	NOAEL	4	ppm	NA	0.45	NOAEL	Sample et al., 1996
Mercury (methyl)		mallard duck	reproduction	LOAEL	0.5	ppm	0.1	0.0064	NOAEL	Sample et al., 1996
Mirex										
Nickel		mallard duck	behavior, growth, mortality	NOAEL	774	ppm	NA	77.4	NOAEL	Sample et al., 1996
Nitrate										
Nitrate/Nitrite										
Oxychlordane	Chlordane	red-winged blackbird	mortality	NOAEL	10	ppm	NA	2.14	NOAEL	Sample et al., 1996
p-Isopropyltoluene	Xylene (total)	Japanese quail	mortality	NOAEL	unk		0.01	106.7	NOAEL	LANL, 2005
Pentachloro-anisole	Pentachlorophenol	quail	body weight	NOAEL	unk		NA	6.73	NOAEL	EPA, 2005
Pentachlorophenol		quail	body weight	NOAEL	unk		NA	6.73	NOAEL	EPA, 2005
Perchlorate		bobwhite quail	growth	NOAEL	1000	ppm	NA	65	NOAEL	McNabb, 2004
Selenium		mallard duck	reproduction	NOAEL	5	ppm	NA	0.5	NOAEL	Sample et al., 1996
Selenium		mallard duck	reproduction	NOAEL	4	ppm	NA	0.4	NOAEL	Sample et al., 1996
Selenium		screech owl	reproduction	NOAEL	3.53	ppm	NA	0.44	NOAEL	Sample et al., 1996
Selenium		black-crowned night heron	reproduction	NOAEL	10	ppm	NA	1.8	NOAEL	Sample et al., 1996
Silver		chicken	body weight	LOAEL	unk		0.1	5.44	NOAEL	LANL, 2005
Strontium										
Sulfate										
1,2,3,7,8-PeDBF										
2,3,4,7,8-PeDBF										
2,3,7,8-TDBF		chicks	mortality, weight gain	LOAEL	0.001	ppm	0.01	0.000001	NOAEL	Sample et al., 1996
Furans (geometric mean)								0.000001	NOAEL	
Thallium		starling	mortality	LD50	unk		0.01	0.35	NOAEL	EPA, 1999
trans-Nonachlor	Chlordane	red-winged blackbird	mortality	NOAEL	10	ppm	NA	2.14	NOAEL	Sample et al., 1996
Vanadium		mallard duck	mortality/weight	NOAEL	110	ppm	NA	11.4	NOAEL	Sample et al., 1996
Zinc		white leghorn hen	reproduction	NOAEL	288	ppm	NA	14.5	NOAEL	Sample et al., 1996

Table 7-25
NOAEL-Based and LOAEL-Based Toxicity Reference Values for
Mammals and Birds

Chemical	Surrogate?	Test Species	Study Effect	Study Endpoint	Study Endpoint Concentration	Units	Uncertainty Factor	Toxicity Reference Value (mg/kg/day)	TRV Endpoint	Reference
Bird LOAELs										
1,3,5-Trinitrobenzene										
1,3-Dinitrobenzene		red-winged blackbird	mortality	LD50	unk		0.03	1.266	LOAEL	EPA, 1999
2,3,7,8-TCDD TE		ring-necked pheasant	reproduction	LOAEL	0.00014	mg/kg/d	NA	0.00014	LOAEL	Sample et al., 1996
Dioxins (geometric mean)								0.00014	LOAEL	
2,4,6-Trinitrotoluene		northern bobwhite quail	hematological effects, organ & immune effects	LOAEL	3300	ppm	0.01	1.8	LOAEL	USACHPPM, 2000
2,4-Dinitrotoluene										
2,6-Dinitrotoluene										
4,4'-DDD	4,4'-DDT	brown pelican	reproduction	LOAEL	0.15	ppm	NA	0.028	LOAEL	Sample et al., 1996
4,4'-DDE	4,4'-DDT	brown pelican	reproduction	LOAEL	0.15	ppm	NA	0.58	LOAEL	EPA, 1993
4,4'-DDT		brown pelican	reproduction	LOAEL	0.15	ppm	NA	0.028	LOAEL	Sample et al., 1996
Aldrin										
alpha-Chlordane	Chlordane	red-winged blackbird	mortality	LOAEL	50	ppm	NA	10.7	LOAEL	Sample et al., 1996
Aluminum		ringed dove	reproduction	NOAEL	1000	ppm	3	329.1	LOAEL	Sample et al., 1996
Antimony										
Aroclor - 1242		screech owl	reproduction	NOAEL	3	ppm	3	1.23	LOAEL	Sample et al., 1996
Aroclor - 1248	Aroclor 1254	ring-necked pheasant	reproduction	LOAEL	1.8	mg/kg/d	NA	1.8	LOAEL	Sample et al., 1996
Aroclor - 1254		ring-necked pheasant	reproduction	LOAEL	1.8	mg/kg/d	NA	1.8	LOAEL	Sample et al., 1996
Aroclor - 1260	Aroclor 1254	ring-necked pheasant	reproduction	LOAEL	1.8	mg/kg/d	NA	1.8	LOAEL	Sample et al., 1996
Aroclor - 1268	Aroclor 1254	ring-necked pheasant	reproduction	LOAEL	1.8	mg/kg/d	NA	1.8	LOAEL	Sample et al., 1996
Barium		chick	mortality	LOAEL	4000	ppm	0.1	41.7	LOAEL	Sample et al., 1996
Benzoic Acid										
bis(2-Ethylhexyl)phthalate		ringed dove	reproduction	NOAEL	10	ppm	3	3.33	LOAEL	Sample et al., 1996
Butylbenzyl phthalate										
Cadmium		mallard duck	reproduction	LOAEL	210	ppm	NA	20	LOAEL	Sample et al., 1996
Chlordane		red-winged blackbird	mortality	LOAEL	50	ppm	NA	10.7	LOAEL	Sample et al., 1996
Chloride										
Chromium (trivalent)		black duck	reproduction	LOAEL	50	ppm	NA	5	LOAEL	Sample et al., 1996
cis-Nonachlor	Chlordane	red-winged blackbird	mortality	LOAEL	50	ppm	NA	10.7	LOAEL	Sample et al., 1996
Copper		chicks	growth, mortality	LOAEL	749	ppm	NA	61.7	LOAEL	Sample et al., 1996
Dieldrin		barn owl	reproduction	NOAEL	0.58	ppm	3	0.231	LOAEL	Sample et al., 1996
Endrin		screech owl	reproduction	LOAEL	0.75	ppm	NA	0.1	LOAEL	Sample et al., 1996
Endrin		mallard duck	reproduction	NOAEL	3	ppm	3	0.9	LOAEL	Sample et al., 1996
gamma-Chlordane	Chlordane	red-winged blackbird	mortality	LOAEL	50	ppm	NA	10.7	LOAEL	Sample et al., 1996
Heptachlor		quail	mortality	LC50	unk		0.03	2.76	LOAEL	PRC, 1998
Hexachlorobenzene										
HMX										
Iron										
Isobutanol										
Lead		American kestrel	reproduction	NOAEL	50	ppm	3	11.55	LOAEL	Sample et al., 1996
Lead		Japanese quail	reproduction	LOAEL	100	ppm	NA	11.3	LOAEL	Sample et al., 1996
Manganese		Japanese quail	growth, aggressive behavior	NOAEL	977	mg/kg/d	10	9770	LOAEL	Sample et al., 1996
Mercury		Japanese quail	reproduction	LOAEL	8	ppm	NA	0.9	LOAEL	Sample et al., 1996
Mercury (methyl)		mallard duck	reproduction	LOAEL	0.5	ppm	NA	0.064	LOAEL	Sample et al., 1996
Mirex										
Nickel		mallard duck	behavior, growth, mortality	LOAEL	1069	ppm	NA	107	LOAEL	Sample et al., 1996
Nitrate										
Nitrate/Nitrite										
Oxychlordane	Chlordane	red-winged blackbird	mortality	LOAEL	50	ppm	NA	10.7	LOAEL	Sample et al., 1996
p-Isopropyltoluene	Xylene (total)	Japanese quail	mortality	NOAEL	unk		3	320.1	NOAEL	LANL, 2005
Pentachloro-anisole	Pentachlorophenol	quail	body weight	LOAEL	unk		NA	67.3	LOAEL	EPA, 2005
Pentachlorophenol		quail	body weight	LOAEL	unk		NA	67.3	LOAEL	EPA, 2005
Perchlorate		bobwhite quail	growth	LOAEL	2000	ppm	NA	130	LOAEL	Mcnabb, 2004
Selenium		mallard duck	reproduction	LOAEL	10	ppm	NA	1	LOAEL	Sample et al., 1996
Selenium		mallard duck	reproduction	LOAEL	8	ppm	NA	0.8	LOAEL	Sample et al., 1996
Selenium		screech owl	reproduction	LOAEL	12	ppm	NA	1.5	LOAEL	Sample et al., 1996
Selenium		black-crowned night heron	reproduction	NOAEL	10	ppm	3	5.4	LOAEL	Sample et al., 1996
Silver		chicken	body weight	LOAEL	unk		NA	54.4	LOAEL	LANL, 2005
Strontium										
Sulfate										
1,2,3,7,8-PeDBF										
2,3,4,7,8-PeDBF										
2,3,7,8-TDBF		chicks	mortality, weight gain	LOAEL	0.001	ppm	0.1	0.00001	LOAEL	Sample et al., 1996
Furans (geometric mean)								0.00001	LOAEL	
Thallium		starling	mortality	LD50	unk		0.03	1.05	LOAEL	EPA, 1999
trans-Nonachlor	Chlordane	red-winged blackbird	mortality	LOAEL	50	ppm	NA	10.7	LOAEL	Sample et al., 1996
Vanadium		mallard duck	mortality/weight	NOAEL	110	ppm	3	34.2	LOAEL	Sample et al., 1996
Zinc		white leghorn hen	reproduction	LOAEL	2028	ppm	NA	131	LOAEL	Sample et al., 1996

[boxed cell] = LOAEL endpoint was obtained by multiplying the NOAEL endpoint by 3. For the LOAEL-based TRVs for trivalent chromium for mammals, and manganese for birds, the LOAEL was obtained by multiplying the NOAEL endpoint by 10 rather than 3 because the elevated chemicals are considered relatively non-toxic.

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Table 7-26
Wildlife NOAEL-Based EEQs for All Food Chain Receptors
Industrial Sub-Area/Goose Prairie Creek Watershed

COPEC	Deer Mouse		Raccoon		Raccoon (Louisiana Black Bear)		Short-tailed Shrew		Red Fox		Muskrat	
	Tier 1	*Tier 2*	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*
2,3,7,8-TCDD TEQ	9.65E+00	3.79E+00	5.51E+00	1.08E+00	3.24E+00	6.31E-01	1.83E+01	6.96E+00	1.93E-01	7.17E-02	1.24E-02	9.97E-03
4,4'-DDD	1.60E-03	7.87E-04	2.96E-04	1.55E-04	1.69E-04	8.62E-05	3.94E-03	2.00E-03	1.17E-04	6.57E-05	4.66E-05	2.84E-05
4,4'-DDE	1.72E-02	7.59E-03	3.21E-03	1.37E-03	1.87E-03	7.88E-04	3.64E-02	1.47E-02	1.03E-03	5.12E-04	1.03E-04	1.78E-05
4,4'-DDT	5.71E-03	2.70E-03	1.05E-03	5.18E-04	6.05E-04	2.96E-04	1.50E-02	7.03E-03	5.63E-04	2.27E-04	5.08E-05	2.98E-05
Aldrin	5.61E-03	2.98E-03	9.49E-04	5.14E-04	5.52E-04	2.96E-04	2.45E-02	8.87E-03	7.10E-04	2.84E-04	3.73E-07	2.46E-07
alpha-Chlordane	3.34E-04	1.19E-04	5.68E-05	2.05E-05	3.31E-05	1.18E-05	9.71E-04	2.90E-04	2.85E-05	9.42E-06	1.34E-07	1.92E-08
Aluminum	2.88E+01	1.46E+01	2.06E+02	1.79E+02	1.13E+02	9.72E+01	1.32E+02	8.67E+01	6.64E+00	5.09E+00	3.77E+01	3.27E+01
Antimony	1.17E+00	3.33E-01	2.72E-01	1.15E-01	1.41E-01	4.89E-02	2.30E+00	7.58E-01	1.21E-01	6.83E-02	1.04E-02	5.17E-03
Aroclor 1242	7.53E-02	3.66E-02	1.31E-02	6.32E-03	7.62E-03	3.64E-03	1.85E-01	9.15E-02	5.47E-03	2.96E-03	1.21E-04	5.29E-06
Aroclor 1248	1.57E-02	7.96E-03	2.66E-03	1.38E-03	1.55E-03	7.93E-04	3.32E-02	1.61E-02	9.73E-04	5.22E-04	1.58E-06	1.15E-06
Aroclor 1254	6.27E-01	2.78E-01	2.31E-01	7.04E-02	1.35E-01	4.03E-02	1.39E+00	5.66E-01	3.80E-02	1.25E-02	5.66E-03	4.42E-03
Aroclor 1260	1.97E-01	9.92E-02	3.38E-02	1.75E-02	1.97E-02	1.01E-02	5.23E-01	2.68E-01	2.08E-02	1.34E-02	8.30E-06	1.02E-06
Barium	0.00E+00	0.00E+00	9.50E-01	8.39E-01	5.35E-01	4.72E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.77E+00	3.98E-01
bis(2-ethylhexyl)phthalate	3.97E-04	2.34E-04	5.26E-03	1.46E-03	3.15E-03	8.88E-04	2.91E-04	1.71E-04	1.12E-04	5.98E-05	1.29E-04	7.56E-05
Cadmium	4.90E-01	4.74E-01	1.23E-01	8.98E-02	7.14E-02	5.21E-02	1.70E+00	1.54E+00	4.26E-02	2.88E-02	3.50E-02	3.34E-02
Chlordane	2.95E-05	1.48E-05	5.02E-06	2.55E-06	2.92E-06	1.47E-06	6.80E-05	3.45E-05	2.00E-06	1.12E-06	1.19E-08	2.38E-09
Chromium	9.46E-01	9.48E-02	2.30E-01	3.23E-02	1.30E-01	1.39E-02	2.02E+00	2.52E-01	8.96E-02	1.88E-02	1.95E-02	1.59E-03
cis-Nonachlor	5.46E-05	2.55E-05	9.29E-06	4.41E-06	5.41E-06	2.54E-06	1.46E-04	5.83E-05	4.28E-06	1.89E-06	2.20E-08	4.12E-09
Copper	7.60E-02	7.45E-02	9.14E-02	4.31E-02	5.13E-02	2.31E-02	1.32E-01	1.19E-01	1.11E-02	6.29E-03	4.11E-02	3.82E-02
Dieldrin	1.29E-02	5.72E-03	9.68E-03	6.91E-03	5.55E-03	3.93E-03	1.41E-01	7.26E-02	4.79E-03	2.42E-03	1.75E-02	1.09E-03
Endrin	2.94E-03	1.48E-03	5.02E-04	2.61E-04	2.92E-04	1.50E-04	7.25E-03	3.07E-03	2.26E-04	1.31E-04	1.16E-06	7.24E-07
gamma-Chlordane	1.56E-03	4.99E-04	2.66E-04	8.63E-05	1.55E-04	4.98E-05	2.00E-03	7.79E-04	5.89E-05	2.53E-05	6.29E-07	8.07E-08
Heptachlor	1.52E-03	7.76E-04	2.58E-04	1.34E-04	1.50E-04	7.74E-05	3.14E-03	1.60E-03	9.30E-05	5.26E-05	2.46E-07	1.57E-07
Hexachlorobenzene	1.60E-03	8.04E-04	2.71E-04	1.39E-04	1.58E-04	8.03E-05	3.60E-01	1.80E-01	1.07E-02	5.91E-03	3.07E-07	2.24E-07
Lead	1.86E-01	1.69E-01	1.28E-01	7.46E-02	5.70E-02	2.88E-02	3.31E-01	2.85E-01	1.15E-02	8.68E-03	9.35E-02	7.56E-02
Manganese	9.31E-04	7.23E-04	1.58E-02	1.71E-03	9.43E-03	1.09E-03	6.82E-04	5.30E-04	2.62E-04	1.85E-04	3.01E-04	2.34E-04
Mercury (inorganic)	4.78E-03	3.84E-03	1.94E-02	1.47E-02	1.07E-02	8.23E-03	8.01E-03	5.96E-03	4.34E-03	2.16E-03	1.81E-04	1.34E-04
Mercury (methyl)	0.00E+00	0.00E+00	4.22E-01	1.52E-01	2.32E-01	7.59E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.27E-01	3.71E-01
Nickel	4.97E-02	1.12E-02	8.90E-03	2.60E-03	5.03E-03	1.33E-03	1.40E-01	3.18E-02	2.38E-03	1.08E-03	1.02E-04	9.76E-05
Nitrate	6.81E-04	3.24E-04	4.87E-03	7.97E-04	2.93E-03	4.99E-04	8.84E-04	3.14E-04	1.78E-04	8.26E-05	1.75E-04	9.28E-05
Nitrate/Nitrite	4.80E-05	3.66E-05	4.42E-04	1.02E-04	2.66E-04	6.43E-05	3.52E-05	2.68E-05	1.35E-05	9.36E-06	1.55E-05	1.18E-05
Pentachloroanisole	2.11E-03	8.67E-04	3.60E-04	1.51E-04	2.09E-04	8.70E-05	6.01E-03	2.01E-03	1.81E-04	6.73E-05	7.33E-07	4.26E-07
Perchlorate	1.53E-01	9.84E-02	8.89E-02	6.25E-02	5.20E-02	3.66E-02	6.08E-02	1.59E-02	1.47E-02	1.05E-02	2.05E-02	1.49E-02
Selenium	8.05E-01	6.26E-01	5.74E-01	4.55E-01	3.20E-01	2.54E-01	7.78E-01	6.45E-01	7.30E-02	4.53E-02	3.21E-01	2.65E-01
Silver	0.00E+00	0.00E+00	5.07E-03	3.91E-03	2.85E-03	2.20E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.53E-03	8.43E-04
Strontium	3.12E-03	1.46E-03	1.55E-03	9.00E-04	8.17E-04	4.39E-04	8.98E-03	3.40E-03	1.52E-03	6.72E-04	2.59E-04	1.44E-04
Thallium	6.89E-02	4.06E-02	1.26E+01	3.08E+00	7.36E+00	1.74E+00	5.05E-02	2.98E-02	1.94E-02	1.04E-02	6.76E-01	5.93E-01
trans-Nonachlor	5.75E-05	2.61E-05	9.80E-06	4.50E-06	5.70E-06	2.60E-06	1.55E-04	5.87E-05	4.55E-06	1.90E-06	2.32E-08	4.21E-09
Vanadium	7.40E-01	4.50E-01	3.82E-01	3.17E-01	1.07E-01	7.63E-02	2.90E+00	2.18E+00	1.51E-01	1.25E-01	3.55E-03	3.00E-03
Zinc	1.20E-01	1.16E-01	7.03E-02	3.86E-02	4.04E-02	2.19E-02	2.27E-01	2.16E-01	8.72E-03	4.77E-03	3.21E-02	2.87E-02
Additive COPEC Groups:												
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane):	3.56E-03	1.46E-03	6.05E-04	2.53E-04	3.52E-04	1.46E-04	6.48E-03	2.83E-03	1.91E-04	9.23E-05	1.07E-06	2.68E-07
DDX (4,4'-DDD, -DDE, -DDT):	2.45E-02	1.11E-02	4.55E-03	2.04E-03	2.64E-03	1.17E-03	5.54E-02	2.37E-02	1.71E-03	8.05E-04	2.01E-04	7.60E-05
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268):	9.16E-01	4.21E-01	2.81E-01	9.55E-02	1.64E-01	5.48E-02	2.13E+00	9.42E-01	6.52E-02	2.94E-02	5.80E-03	4.43E-03
Phthalates (bis-2ethylhexyl and butylbenzyl):	3.97E-04	2.34E-04	5.26E-03	1.46E-03	3.15E-03	8.88E-04	2.91E-04	1.71E-04	1.12E-04	5.98E-05	1.29E-04	7.56E-05
Aldrin/Dieldrin/Endrin:	2.15E-02	1.02E-02	1.11E-02	7.68E-03	6.39E-03	4.38E-03	1.73E-01	8.46E-02	5.72E-03	2.83E-03	1.75E-02	1.09E-03

See notes on last page.

Table 7-26
Wildlife NOAEL-Based EEQs for All Food Chain Receptors
Industrial Sub-Area/Goose Prairie Creek Watershed

	River Otter		Townsend's Big-Eared Bat		Bank Swallow		American Woodcock		Belted Kingfisher		Red-tailed Hawk	
COPEC	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*
2,3,7,8-TCDD TEQ	**2.11E+01**	**1.72E+00**	4.53E-03	1.93E-03	1.74E-01	4.58E-02	**1.84E+00**	7.23E-01	**1.28E+01**	1.89E-01	8.18E-01	9.12E-02
4,4'-DDD	4.07E-06	2.26E-06	1.32E-05	2.34E-06	6.79E-02	4.12E-02	**1.22E+00**	6.01E-01	1.52E-02	1.74E-03	1.66E-02	1.08E-02
4,4'-DDE	1.81E-05	9.95E-06	1.06E-03	1.08E-04	2.31E-02	1.05E-02	6.08E-01	2.76E-01	0.00E+00	0.00E+00	7.14E-03	5.32E-03
4,4'-DDT	1.60E-05	7.02E-06	4.55E-05	7.75E-06	2.45E-01	1.47E-01	**4.34E+00**	**2.06E+00**	3.95E-02	4.50E-03	8.17E-02	3.63E-02
Aldrin	6.93E-06	3.58E-06	3.81E-06	1.49E-06	NA	NA	NA	NA	NA	NA	NA	NA
alpha-Chlordane	4.19E-07	1.45E-07	1.37E-06	1.16E-07	7.24E-05	2.58E-05	1.90E-03	6.80E-04	0.00E+00	0.00E+00	2.55E-05	1.21E-05
Aluminum	**2.05E+01**	**1.32E+01**	8.30E-01	3.27E-01	**1.82E+01**	**1.59E+01**	**1.85E+00**	**1.17E+00**	**8.05E+00**	9.32E-01	5.52E-02	4.96E-02
Antimony	2.69E-03	1.25E-03	1.06E-01	3.13E-02	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242	9.36E-05	4.46E-05	1.24E-03	3.20E-05	1.27E-03	6.19E-04	3.32E-02	1.64E-02	0.00E+00	0.00E+00	4.45E-04	2.89E-04
Aroclor 1248	1.97E-05	9.71E-06	1.62E-05	6.97E-06	6.03E-04	3.05E-04	1.58E-02	8.05E-03	0.00E+00	0.00E+00	2.12E-04	1.42E-04
Aroclor 1254	1.40E-02	1.99E-03	5.51E-04	1.01E-04	2.89E-01	5.75E-02	6.33E-01	2.81E-01	1.10E-01	2.75E-03	7.63E-03	2.82E-03
Aroclor 1260	3.83E-04	2.14E-04	8.47E-05	6.18E-06	7.58E-03	3.80E-03	1.99E-01	1.00E-01	0.00E+00	0.00E+00	4.08E-03	3.10E-03
Barium	1.00E-01	6.52E-02	0.00E+00	0.00E+00	**1.25E+00**	**1.10E+00**	0.00E+00	0.00E+00	5.51E-01	6.45E-02	0.00E+00	0.00E+00
bis(2-ethylhexyl)phthalate	2.96E-02	5.94E-03	2.09E-04	7.29E-05	5.24E-03	3.08E-03	2.19E-03	1.29E-03	**4.15E+00**	1.50E-01	2.67E-01	7.27E-02
Cadmium	3.76E-03	3.97E-04	2.81E-02	1.61E-02	1.57E-01	4.14E-02	8.69E-01	8.40E-01	5.30E-02	7.74E-04	5.88E-03	4.07E-03
Chlordane	3.71E-08	1.80E-08	1.21E-07	1.44E-08	6.40E-06	3.20E-06	1.68E-04	8.45E-05	0.00E+00	0.00E+00	2.26E-06	1.50E-06
Chromium	1.48E-03	2.64E-04	1.99E-01	9.61E-03	2.72E-01	2.50E-02	**7.32E+00**	8.76E-01	0.00E+00	0.00E+00	1.46E-01	4.31E-02
cis-Nonachlor	6.86E-08	3.12E-08	2.24E-07	2.49E-08	1.18E-05	5.54E-06	3.11E-04	1.46E-04	0.00E+00	0.00E+00	4.18E-06	2.60E-06
Copper	1.08E-01	1.35E-02	3.93E-02	2.28E-02	6.21E-02	1.71E-02	3.72E-02	3.64E-02	2.45E-01	5.76E-03	1.55E-02	3.25E-03
Dieldrin	7.43E-04	4.68E-04	2.02E-03	1.48E-05	1.00E-02	8.46E-03	8.10E-03	3.97E-03	4.22E-03	4.80E-04	1.12E-04	7.27E-05
Endrin	4.03E-06	2.59E-06	1.18E-05	4.38E-06	9.14E-05	4.60E-05	2.40E-03	1.21E-03	0.00E+00	0.00E+00	1.05E-03	9.17E-04
gamma-Chlordane	1.96E-06	6.11E-07	6.41E-06	4.88E-07	3.39E-04	1.08E-04	8.90E-03	2.86E-03	0.00E+00	0.00E+00	1.20E-04	5.08E-05
Heptachlor	1.95E-06	9.64E-07	2.51E-06	9.53E-07	1.68E-05	8.55E-06	4.41E-04	2.26E-04	0.00E+00	0.00E+00	6.02E-06	4.07E-06
Hexachlorobenzene	2.04E-06	9.98E-07	3.13E-06	1.36E-06	NA	NA	NA	NA	NA	NA	NA	NA
Lead	2.78E-02	5.26E-03	2.75E-02	1.53E-02	**2.02E+00**	3.85E-01	**3.69E+00**	**3.34E+00**	7.20E-01	2.88E-02	4.08E-02	2.03E-02
Manganese	8.96E-02	6.46E-03	4.90E-04	2.26E-04	6.70E-05	5.20E-05	2.79E-05	2.17E-05	6.84E-02	8.85E-04	4.39E-03	4.37E-04
Mercury (inorganic)	6.57E-05	2.47E-05	1.84E-03	8.10E-04	1.05E-02	8.77E-03	2.98E-01	2.42E-01	0.00E+00	0.00E+00	5.12E-03	2.68E-03
Mercury (methyl)	4.42E-02	1.15E-02	0.00E+00	0.00E+00	**5.14E+00**	**1.65E+00**	0.00E+00	0.00E+00	**2.36E+00**	1.16E-01	0.00E+00	0.00E+00
Nickel	1.80E-05	1.07E-05	1.05E-03	5.91E-04	2.56E-03	5.39E-03	6.84E-01	1.54E-01	0.00E+00	0.00E+00	3.27E-03	2.74E-03
Nitrate	2.70E-02	2.99E-03	3.34E-04	1.04E-04	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	2.47E-03	3.93E-04	2.53E-05	1.14E-05	NA	NA	NA	NA	NA	NA	NA	NA
Pentachloroanisole	2.76E-06	1.10E-06	7.48E-06	2.58E-06	7.64E-06	3.13E-06	2.01E-04	8.26E-05	0.00E+00	0.00E+00	2.80E-06	1.52E-06
Perchlorate	5.67E-05	1.63E-05	2.09E-01	9.04E-02	3.00E-04	4.62E-05	8.54E-03	1.62E-03	0.00E+00	0.00E+00	2.39E-04	9.99E-05
Selenium	8.25E-02	5.19E-02	5.52E-01	2.40E-01	1.44E-01	1.23E-01	1.48E-01	1.19E-01	4.65E-01	5.30E-02	4.37E-02	3.00E-02
Silver	5.34E-04	3.03E-04	0.00E+00	0.00E+00	9.47E-02	7.30E-02	0.00E+00	0.00E+00	4.19E-02	4.28E-03	0.00E+00	0.00E+00
Strontium	1.34E-05	6.13E-06	2.64E-03	8.72E-04	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	**5.31E+01**	3.47E-01	3.63E-02	1.27E-02	3.90E-01	3.45E-01	4.86E-04	2.86E-04	**9.62E+00**	2.37E-02	6.05E-01	1.84E-03
trans-Nonachlor	7.24E-08	3.19E-08	2.36E-07	2.55E-08	1.25E-05	5.65E-06	3.28E-04	1.49E-04	0.00E+00	0.00E+00	4.41E-06	2.65E-06
Vanadium	5.74E-04	3.68E-04	3.62E-02	1.81E-02	9.26E-04	4.15E-04	5.28E-02	3.77E-02	0.00E+00	0.00E+00	1.63E-03	1.51E-03
Zinc	4.34E-02	1.33E-02	2.58E-02	1.46E-02	**2.21E+00**	5.68E-01	**3.08E+00**	**3.00E+00**	**4.60E+00**	2.41E-01	2.93E-01	1.25E-01
Additive COPEC Groups:												
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane):	4.51E-06	1.80E-06	1.09E-05	1.62E-06	4.59E-04	1.57E-04	1.21E-02	4.15E-03	0.00E+00	0.00E+00	1.62E-04	7.37E-05
DDX (4,4'-DDD, -DDE, -DDT):	3.82E-05	1.92E-05	1.11E-03	1.18E-04	3.36E-01	1.99E-01	**6.16E+00**	**2.94E+00**	5.47E-02	6.24E-03	1.05E-01	5.24E-02
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268):	1.45E-02	2.26E-03	1.89E-03	1.46E-04	2.98E-01	6.23E-02	8.81E-01	4.06E-01	1.10E-01	2.75E-03	1.24E-02	6.34E-03
Phthalates (bis-2ethylhexyl and butylbenzyl):	2.96E-02	5.94E-03	2.09E-04	7.29E-05	5.24E-03	3.08E-03	2.19E-03	1.29E-03	**4.15E+00**	1.50E-01	2.67E-01	7.27E-02
Aldrin/Dieldrin/Endrin:	7.54E-04	4.74E-04	2.04E-03	2.07E-05	1.01E-02	8.51E-03	1.05E-02	5.18E-03	4.22E-03	4.80E-04	1.17E-03	9.89E-04

Notes: COPECs with all EEQs = 0 or "not available" (NA) due to missing toxicity values, are not presented.
EEQs equal to or above 1.0 are bolded and shaded.

Table 7-27
Wildlife NOAEL-Based EEQs for All Food Chain Receptors
Industrial Sub-Area/Central Creek Watershed

	Deer Mouse		Raccoon		Raccoon (Louisiana Black Bear)		Short-tailed Shrew		Red Fox		Muskrat	
COPEC	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*
2,3,7,8-TCDD TEQ	9.65E+00	3.79E+00	8.27E+00	1.46E+00	4.86E+00	8.48E-01	1.83E+01	6.96E+00	1.93E-01	7.20E-02	6.53E-02	4.12E-02
4,4'-DDD	1.60E-03	7.87E-04	2.75E-04	1.37E-04	1.60E-04	7.89E-05	3.94E-03	2.00E-03	1.17E-04	6.57E-05	1.30E-06	3.87E-07
4,4'-DDE	1.72E-02	7.59E-03	3.21E-03	1.37E-03	1.87E-03	7.88E-04	3.64E-02	1.47E-02	1.03E-03	5.12E-04	1.03E-04	1.78E-05
4,4'-DDT	5.71E-03	2.70E-03	9.88E-04	4.69E-04	5.75E-04	2.71E-04	1.50E-02	7.03E-03	5.63E-04	2.27E-04	4.46E-06	1.28E-06
Aldrin	5.61E-03	2.98E-03	9.49E-04	5.14E-04	5.52E-04	2.96E-04	2.45E-02	8.87E-03	7.10E-04	2.84E-04	3.73E-07	2.46E-07
alpha-Chlordane	3.34E-04	1.19E-04	5.68E-05	2.05E-05	3.31E-05	1.18E-05	9.71E-04	2.90E-04	2.85E-05	9.42E-06	1.34E-07	1.92E-08
Aluminum	2.94E+01	1.49E+01	1.95E+02	1.62E+02	1.06E+02	8.80E+01	1.32E+02	8.70E+01	6.81E+00	5.19E+00	3.58E+01	2.96E+01
Antimony	1.17E+00	3.33E-01	2.72E-01	1.15E-01	1.41E-01	4.89E-02	2.30E+00	7.58E-01	1.45E-01	6.83E-02	1.04E-02	5.17E-03
Aroclor 1242	7.53E-02	3.66E-02	1.31E-02	6.32E-03	7.62E-03	3.64E-03	1.85E-01	9.15E-02	5.47E-03	2.96E-03	1.21E-04	5.29E-06
Aroclor 1248	1.57E-02	7.96E-03	2.66E-03	1.38E-03	1.55E-03	7.93E-04	3.32E-02	1.61E-02	9.73E-04	5.22E-04	1.58E-06	1.15E-06
Aroclor 1254	6.27E-01	2.78E-01	1.06E-01	4.72E-02	6.17E-02	2.72E-02	1.39E+00	5.66E-01	3.80E-02	1.25E-02	5.40E-05	1.67E-05
Aroclor 1260	1.97E-01	9.92E-02	3.38E-02	1.75E-02	1.97E-02	1.01E-02	5.23E-01	2.68E-01	2.08E-02	1.34E-02	8.30E-06	1.02E-06
Barium	0.00E+00	0.00E+00	9.40E-01	8.39E-01	5.29E-01	4.72E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.75E+00	3.98E-01
Cadmium	4.91E-01	4.74E-01	1.34E-01	9.58E-02	7.84E-02	5.57E-02	1.70E+00	1.55E+00	4.28E-02	2.90E-02	3.61E-02	3.26E-02
Chlordane	2.95E-05	1.48E-05	5.02E-06	2.55E-06	2.92E-06	1.47E-06	6.80E-05	3.45E-05	2.00E-06	1.12E-06	1.19E-08	2.38E-09
Chromium	9.46E-01	9.48E-02	2.30E-01	3.23E-02	1.30E-01	1.39E-02	2.02E+00	2.52E-01	8.96E-02	1.88E-02	1.95E-02	1.59E-03
cis-Nonachlor	5.46E-05	2.55E-05	9.29E-06	4.41E-06	5.41E-06	2.54E-06	1.46E-04	5.83E-05	4.28E-06	1.89E-06	2.20E-08	4.12E-09
Copper	7.59E-02	7.44E-02	6.88E-02	3.67E-02	3.84E-02	1.97E-02	1.32E-01	1.19E-01	1.11E-02	6.27E-03	3.20E-02	2.99E-02
Dieldrin	1.29E-02	5.72E-03	2.79E-03	9.95E-04	1.63E-03	5.73E-04	1.41E-01	7.26E-02	4.79E-03	2.42E-03	1.98E-04	2.45E-06
Endrin	2.94E-03	1.48E-03	5.02E-04	2.61E-04	2.92E-04	1.50E-04	7.25E-03	3.07E-03	2.26E-04	1.31E-04	1.16E-06	7.24E-07
gamma-Chlordane	1.56E-03	4.99E-04	2.66E-04	8.63E-05	1.55E-04	4.98E-05	2.00E-03	7.79E-04	5.89E-05	2.53E-05	6.29E-07	8.07E-08
Heptachlor	1.52E-03	7.76E-04	2.58E-04	1.34E-04	1.50E-04	7.74E-05	3.14E-03	1.60E-03	9.30E-05	5.26E-05	2.46E-07	1.57E-07
Hexachlorobenzene	1.60E-03	8.04E-04	2.71E-04	1.39E-04	1.58E-04	8.03E-05	3.60E-01	1.80E-01	1.07E-02	5.91E-03	3.07E-07	2.24E-07
Lead	1.86E-01	1.69E-01	6.00E-02	5.27E-02	2.65E-02	2.32E-02	3.31E-01	2.85E-01	1.14E-02	8.66E-03	2.74E-03	2.56E-03
Manganese	1.55E-03	1.08E-03	2.63E-02	2.55E-03	1.57E-02	1.63E-03	1.14E-03	7.92E-04	4.36E-04	2.76E-04	5.01E-04	3.49E-04
Mercury (inorganic)	4.78E-03	3.84E-03	1.94E-02	1.47E-02	1.07E-02	8.23E-03	8.01E-03	5.96E-03	4.34E-03	2.16E-03	1.81E-04	1.34E-04
Mercury (methyl)	0.00E+00	0.00E+00	1.53E-01	6.07E-02	8.39E-02	3.04E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.34E-01	2.16E-01
Nickel	4.97E-02	1.12E-02	1.35E-02	3.82E-03	7.53E-03	1.85E-03	1.40E-01	3.18E-02	2.38E-03	1.08E-03	2.67E-03	2.36E-03
Nitrate	6.69E-04	3.29E-04	4.78E-03	8.12E-04	2.87E-03	5.09E-04	8.76E-04	3.18E-04	1.75E-04	8.39E-05	1.79E-04	9.84E-05
Nitrate/Nitrite	4.18E-05	3.28E-05	3.85E-04	9.16E-05	2.31E-04	5.77E-05	3.06E-05	2.41E-05	1.18E-05	8.40E-06	1.35E-05	1.06E-05
Pentachloroanisole	2.11E-03	8.67E-04	3.60E-04	1.51E-04	2.09E-04	8.70E-05	6.01E-03	2.01E-03	1.81E-04	6.73E-05	7.33E-07	4.26E-07
Perchlorate	1.53E-01	9.84E-02	8.89E-02	6.25E-02	5.20E-02	3.66E-02	6.08E-02	1.59E-02	1.47E-02	1.05E-02	2.05E-02	1.49E-02
Selenium	8.00E-01	6.21E-01	4.86E-01	3.82E-01	2.69E-01	2.12E-01	7.74E-01	6.41E-01	7.14E-02	4.40E-02	2.26E-01	1.87E-01
Strontium	3.12E-03	1.46E-03	1.55E-03	9.00E-04	8.17E-04	4.39E-04	8.98E-03	3.40E-03	1.52E-03	6.72E-04	2.59E-04	1.44E-04
Thallium	0.00E+00	0.00E+00	3.48E+00	3.00E+00	1.96E+00	1.69E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.63E-01	5.72E-01
trans-Nonachlor	5.75E-05	2.61E-05	9.80E-06	4.50E-06	5.70E-06	2.60E-06	1.55E-04	5.87E-05	4.55E-06	1.90E-06	2.32E-08	4.21E-09
Vanadium	7.88E-01	4.88E-01	8.19E-01	4.22E-01	3.71E-01	1.43E-01	2.93E+00	2.21E+00	1.65E-01	1.34E-01	1.89E-02	1.52E-02
Zinc	1.19E-01	1.16E-01	4.28E-02	3.08E-02	2.45E-02	1.75E-02	2.27E-01	2.16E-01	8.68E-03	4.74E-03	1.96E-02	1.78E-02
Additive COPEC Groups:												
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane):	3.56E-03	1.46E-03	6.05E-04	2.53E-04	3.52E-04	1.46E-04	6.48E-03	2.83E-03	1.91E-04	9.23E-05	1.07E-06	2.68E-07
DDX (4,4'-DDD, -DDE, -DDT):	2.45E-02	1.11E-02	4.47E-03	1.97E-03	2.60E-03	1.14E-03	5.54E-02	2.37E-02	1.71E-03	8.05E-04	1.09E-04	1.95E-05
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268):	9.16E-01	4.21E-01	1.55E-01	7.24E-02	9.05E-02	4.17E-02	2.13E+00	9.42E-01	6.52E-02	2.94E-02	1.85E-04	2.42E-05
Aldrin/Dieldrin/Endrin:	2.15E-02	1.02E-02	4.24E-03	1.77E-03	2.47E-03	1.02E-03	1.73E-01	8.46E-02	5.72E-03	2.83E-03	1.99E-04	3.42E-06

See notes on last page.

Table 7-27
Wildlife NOAEL-Based EEQs for All Food Chain Receptors
Industrial Sub-Area/Central Creek Watershed

	River Otter		Townsend's Big-Eared Bat		Bank Swallow		American Woodcock		Belted Kingfisher		Red-tailed Hawk	
COPEC	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*
2,3,7,8-TCDD TEQ	**3.20E+01**	**2.81E+00**	5.10E-03	2.27E-03	6.62E-01	1.08E-01	**1.84E+00**	7.23E-01	**1.84E+01**	3.09E-01	**1.16E+00**	1.39E-01
4,4'-DDD	2.18E-06	1.04E-06	1.32E-05	2.34E-06	4.64E-02	2.27E-02	**1.22E+00**	6.01E-01	0.00E+00	0.00E+00	1.66E-02	1.08E-02
4,4'-DDE	1.93E-05	1.06E-05	1.06E-03	1.08E-04	2.31E-02	1.05E-02	6.08E-01	2.76E-01	0.00E+00	0.00E+00	7.14E-03	5.32E-03
4,4'-DDT	1.08E-05	3.48E-06	4.55E-05	7.75E-06	1.65E-01	7.81E-02	**4.34E+00**	**2.06E+00**	0.00E+00	0.00E+00	8.17E-02	3.63E-02
Aldrin	7.39E-06	3.81E-06	3.81E-06	1.49E-06	NA	NA	NA	NA	NA	NA	NA	NA
alpha-Chlordane	4.47E-07	1.55E-07	1.37E-06	1.16E-07	7.24E-05	2.58E-05	1.90E-03	6.80E-04	0.00E+00	0.00E+00	2.55E-05	1.21E-05
Aluminum	**2.07E+01**	**1.27E+01**	**1.16E+00**	4.45E-01	**1.72E+01**	**1.43E+01**	**1.85E+00**	**1.17E+00**	**7.60E+00**	8.97E-01	5.85E-02	5.16E-02
Antimony	2.87E-03	1.33E-03	1.06E-01	3.13E-02	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242	9.97E-05	4.75E-05	1.24E-03	3.20E-05	1.27E-03	6.19E-04	3.32E-02	1.64E-02	0.00E+00	0.00E+00	4.45E-04	2.89E-04
Aroclor 1248	2.10E-05	1.03E-05	1.62E-05	6.97E-06	6.03E-04	3.05E-04	1.58E-02	8.05E-03	0.00E+00	0.00E+00	2.12E-04	1.42E-04
Aroclor 1254	7.54E-04	2.00E-04	5.51E-04	1.01E-04	2.41E-02	1.06E-02	6.33E-01	2.81E-01	0.00E+00	0.00E+00	7.63E-03	2.82E-03
Aroclor 1260	4.08E-04	2.28E-04	8.47E-05	6.18E-06	7.58E-03	3.80E-03	1.99E-01	1.00E-01	0.00E+00	0.00E+00	4.08E-03	3.10E-03
Barium	1.05E-01	6.94E-02	0.00E+00	0.00E+00	**1.23E+00**	**1.10E+00**	0.00E+00	0.00E+00	5.45E-01	6.88E-02	0.00E+00	0.00E+00
Cadmium	6.65E-02	2.76E-02	2.85E-02	1.63E-02	1.63E-01	4.12E-02	8.70E-01	8.40E-01	3.98E-01	2.94E-02	2.79E-02	1.71E-02
Chlordane	3.95E-08	1.92E-08	1.21E-07	1.44E-08	6.40E-06	3.20E-06	1.68E-04	8.45E-05	0.00E+00	0.00E+00	2.26E-06	1.50E-06
Chromium	1.58E-03	2.81E-04	1.99E-01	9.61E-03	2.72E-01	2.50E-02	**7.32E+00**	8.76E-01	0.00E+00	0.00E+00	1.46E-01	4.31E-02
cis-Nonachlor	7.31E-08	3.33E-08	2.24E-07	2.49E-08	1.18E-05	5.54E-06	3.11E-04	1.46E-04	0.00E+00	0.00E+00	4.18E-06	2.60E-06
Copper	9.48E-02	1.07E-02	3.93E-02	2.27E-02	3.59E-02	1.03E-02	3.72E-02	3.64E-02	1.97E-01	4.45E-03	1.32E-02	2.71E-03
Dieldrin	1.62E-05	7.68E-06	2.02E-03	1.48E-05	3.08E-04	1.50E-04	8.10E-03	3.97E-03	0.00E+00	0.00E+00	1.12E-04	7.27E-05
Endrin	4.29E-06	2.75E-06	1.18E-05	4.38E-06	9.14E-05	4.60E-05	2.40E-03	1.21E-03	0.00E+00	0.00E+00	1.05E-03	9.17E-04
gamma-Chlordane	2.09E-06	6.51E-07	6.41E-06	4.88E-07	3.39E-04	1.08E-04	8.90E-03	2.86E-03	0.00E+00	0.00E+00	1.20E-04	5.08E-05
Heptachlor	2.07E-06	1.03E-06	2.51E-06	9.53E-07	1.68E-05	8.55E-06	4.41E-04	2.26E-04	0.00E+00	0.00E+00	6.02E-06	4.07E-06
Hexachlorobenzene	2.18E-06	1.06E-06	3.13E-06	1.36E-06	NA	NA	NA	NA	NA	NA	NA	NA
Lead	1.50E-02	2.67E-03	2.75E-02	1.52E-02	1.11E-01	1.00E-01	**3.69E+00**	**3.34E+00**	2.47E-01	8.25E-03	3.29E-02	1.83E-02
Manganese	1.59E-01	1.03E-02	8.15E-04	3.37E-04	1.11E-04	7.77E-05	4.65E-05	3.24E-05	1.14E-01	1.41E-03	7.31E-03	6.53E-04
Mercury (inorganic)	6.99E-05	2.63E-05	1.84E-03	8.10E-04	1.05E-02	8.77E-03	2.98E-01	2.42E-01	0.00E+00	0.00E+00	5.12E-03	2.68E-03
Mercury (methyl)	1.70E-02	4.89E-03	0.00E+00	0.00E+00	**1.86E+00**	6.61E-01	0.00E+00	0.00E+00	8.55E-01	4.95E-02	0.00E+00	0.00E+00
Nickel	5.33E-04	1.07E-04	1.05E-03	5.91E-04	1.47E-02	2.95E-03	6.84E-02	1.54E-02	5.73E-03	2.30E-04	3.27E-04	2.74E-04
Nitrate	2.81E-02	3.24E-03	3.28E-04	1.05E-04	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	2.29E-03	3.76E-04	2.20E-05	1.02E-05	NA	NA	NA	NA	NA	NA	NA	NA
Pentachloroanisole	2.94E-06	1.17E-06	7.48E-06	2.58E-06	7.64E-06	3.13E-06	2.01E-04	8.26E-05	0.00E+00	0.00E+00	2.80E-06	1.52E-06
Perchlorate	6.03E-05	1.74E-05	2.09E-01	9.04E-02	3.00E-04	4.62E-05	8.54E-03	1.62E-03	0.00E+00	0.00E+00	2.39E-04	9.99E-05
Selenium	1.98E-02	1.22E-02	5.49E-01	2.38E-01	9.82E-02	8.48E-02	1.47E-01	1.19E-01	1.69E-01	2.07E-02	2.95E-02	1.78E-02
Strontium	1.43E-05	6.53E-06	2.64E-03	8.72E-04	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	3.91E-01	2.49E-01	0.00E+00	0.00E+00	3.94E-01	3.40E-01	0.00E+00	0.00E+00	1.74E-01	2.12E-02	0.00E+00	0.00E+00
trans-Nonachlor	7.71E-08	3.39E-08	2.36E-07	2.55E-08	1.25E-05	5.65E-06	3.28E-04	1.49E-04	0.00E+00	0.00E+00	4.41E-06	2.65E-06
Vanadium	**2.61E+00**	4.32E-01	6.12E-02	2.99E-02	1.63E-03	9.70E-04	5.31E-02	3.79E-02	3.82E-01	1.21E-02	2.62E-02	7.10E-03
Zinc	1.77E-03	3.29E-04	2.57E-02	1.46E-02	9.65E-01	3.01E-01	**3.08E+00**	**3.00E+00**	3.65E-01	1.28E-02	5.60E-02	2.28E-02
Additive COPEC Groups:												
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane):	4.80E-06	1.92E-06	1.09E-05	1.62E-06	4.59E-04	1.57E-04	1.21E-02	4.15E-03	0.00E+00	0.00E+00	1.62E-04	7.37E-05
DDX (4,4'-DDD, -DDE, -DDT):	3.23E-05	1.51E-05	1.11E-03	1.18E-04	2.35E-01	1.11E-01	**6.16E+00**	**2.94E+00**	0.00E+00	0.00E+00	1.05E-01	5.24E-02
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268):	1.28E-03	4.86E-04	1.89E-03	1.46E-04	3.35E-02	1.54E-02	8.81E-01	4.06E-01	0.00E+00	0.00E+00	1.24E-02	6.34E-03
Aldrin/Dieldrin/Endrin:	2.79E-05	1.42E-05	2.04E-03	2.07E-05	4.00E-04	1.96E-04	1.05E-02	5.18E-03	0.00E+00	0.00E+00	1.17E-03	9.89E-04

Notes: COPECs with all EEQs = 0 or "not available" (NA) due to missing toxicity values, are not presented.
EEQs equal to or above 1.0 are bolded and shaded.

Table 7-28
Wildlife NOAEL-Based EEQs for All Food Chain Receptors
Low Impact Sub-Area/Goose Prairie Creek Watershed

COPEC	Deer Mouse Tier 1	Deer Mouse Tier 2	Raccoon Tier 1	Raccoon Tier 2	Raccoon (Louisiana Black Bear) Tier 1	Raccoon (Louisiana Black Bear) Tier 2	Short-tailed Shrew Tier 1	Short-tailed Shrew Tier 2	Red Fox Tier 1	Red Fox Tier 2	Muskrat Tier 1	Muskrat Tier 2
2,3,7,8-TCDD TEQ	4.08E+00	1.63E+00	4.59E+00	7.26E-01	2.70E+00	4.24E-01	9.49E+00	3.81E+00	1.00E-01	4.35E-02	1.22E-02	9.85E-03
4,4'-DDD	1.27E-03	4.18E-04	2.39E-04	9.04E-05	1.35E-04	4.92E-05	2.98E-03	1.01E-03	8.87E-05	3.64E-05	4.63E-05	2.82E-05
4,4'-DDE	4.05E-03	1.65E-03	7.58E-04	2.97E-04	4.41E-04	1.71E-04	8.76E-03	3.78E-03	2.48E-04	1.45E-04	2.44E-05	3.87E-06
4,4'-DDT	2.09E-03	5.79E-04	4.19E-04	1.49E-04	2.41E-04	8.36E-05	3.97E-03	1.39E-03	1.49E-04	4.94E-05	4.79E-05	2.88E-05
Aldrin	6.99E-04	3.80E-04	1.18E-04	6.55E-05	6.88E-05	3.78E-05	1.77E-03	9.13E-04	5.13E-05	3.21E-05	4.65E-08	3.14E-08
alpha-Chlordane	6.03E-05	2.92E-05	1.03E-05	5.04E-06	5.98E-06	2.90E-06	1.37E-04	6.73E-05	4.03E-06	2.40E-06	2.43E-08	4.71E-09
Aluminum	3.26E-01	2.69E-01	1.93E+02	1.69E+02	1.09E+02	9.49E+01	2.39E-01	1.97E-01	9.18E-02	7.57E-02	3.77E+01	3.26E+01
Antimony	2.95E-01	7.12E-02	6.86E-02	2.45E-02	3.55E-02	1.05E-02	6.20E-01	1.89E-01	3.25E-02	1.88E-02	2.62E-03	1.11E-03
Aroclor 1242	3.33E-02	1.58E-02	5.79E-03	2.73E-03	3.37E-03	1.58E-03	7.59E-02	3.67E-02	2.25E-03	1.31E-03	5.36E-05	2.29E-06
Aroclor 1248	1.53E-02	7.55E-03	2.60E-03	1.30E-03	1.51E-03	7.52E-04	3.45E-02	1.71E-02	1.01E-03	6.09E-04	1.55E-06	1.09E-06
Aroclor 1254	4.56E-02	2.12E-02	1.33E-01	2.68E-02	7.77E-02	1.51E-02	1.04E-01	4.90E-02	2.85E-03	1.19E-03	5.61E-03	4.41E-03
Aroclor 1260	8.71E-02	2.74E-02	1.49E-02	4.82E-03	8.68E-03	2.79E-03	1.69E-01	6.35E-02	6.71E-03	3.49E-03	3.66E-06	2.82E-07
Aroclor 1268	8.44E-03	4.67E-03	1.58E-03	9.46E-04	9.20E-04	5.46E-04	2.00E-02	1.09E-02	6.64E-04	4.52E-04	4.82E-05	4.50E-05
Barium	0.00E+00	0.00E+00	9.50E-01	8.39E-01	5.35E-01	4.72E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.77E+00	3.98E-01
Benzoic Acid	1.30E-02	6.45E-03	3.43E-03	2.03E-03	2.01E-03	1.18E-03	9.00E-03	4.58E-03	3.78E-04	2.57E-04	4.01E-04	3.01E-04
bis(2-ethylhexyl)phthalate	3.97E-04	2.34E-04	5.26E-03	1.46E-03	3.15E-03	8.88E-04	2.91E-04	1.71E-04	1.12E-04	6.58E-05	1.29E-04	7.56E-05
Cadmium	4.77E-01	4.18E-01	1.20E-01	7.96E-02	6.99E-02	4.62E-02	1.09E+00	9.66E-01	2.25E-02	1.69E-02	3.49E-02	3.31E-02
Chlordane	3.01E-05	1.60E-05	5.12E-06	2.77E-06	2.98E-06	1.59E-06	7.20E-05	4.66E-05	2.12E-06	1.66E-06	1.21E-08	2.58E-09
Chromium	6.37E-01	6.03E-02	1.55E-01	2.05E-02	8.76E-02	8.82E-03	1.25E+00	1.55E-01	5.55E-02	1.28E-02	1.31E-02	1.01E-03
cis-Nonachlor	3.97E-05	1.96E-05	6.76E-06	3.39E-06	3.93E-06	1.95E-06	9.40E-05	4.74E-05	2.76E-06	1.69E-06	1.60E-08	3.17E-09
Copper	5.73E-02	5.51E-02	8.24E-02	3.41E-02	4.70E-02	1.87E-02	9.87E-02	9.49E-02	5.71E-03	4.26E-03	3.99E-02	3.70E-02
Dieldrin	7.29E-03	3.53E-03	8.47E-03	6.53E-03	4.84E-03	3.71E-03	1.56E-02	8.45E-03	5.29E-04	3.09E-04	1.74E-02	1.09E-03
Endrin	2.13E-03	1.06E-03	3.64E-04	1.87E-04	2.11E-04	1.08E-04	4.98E-03	2.76E-03	1.55E-04	1.29E-04	8.39E-07	5.20E-07
Hexachlorobenzene	1.99E-03	1.01E-03	3.38E-04	1.75E-04	1.96E-04	1.01E-04	4.96E-03	2.49E-03	1.47E-04	8.99E-05	3.81E-07	2.81E-07
Lead	7.94E-02	7.16E-02	9.40E-02	4.41E-02	4.30E-02	1.61E-02	1.79E-01	1.60E-01	5.99E-03	5.22E-03	9.23E-02	7.45E-02
Manganese	1.79E-01	1.52E-01	9.08E-02	6.26E-02	4.33E-02	2.78E-02	4.11E-01	3.61E-01	2.05E-02	1.64E-02	8.10E-03	5.70E-03
Mercury (inorganic)	1.79E-03	1.72E-03	5.78E-03	5.54E-03	3.35E-03	3.21E-03	3.48E-03	3.34E-03	9.64E-04	8.89E-04	4.45E-05	4.23E-05
Mercury (methyl)	0.00E+00	0.00E+00	4.22E-01	1.52E-01	2.32E-01	7.59E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.27E-01	3.71E-01
Mirex	3.69E-03	1.80E-03	6.26E-04	3.09E-04	3.65E-04	1.78E-04	8.61E-03	4.18E-03	2.48E-04	1.46E-04	1.23E-06	1.04E-07
Nickel	3.98E-02	8.60E-03	7.14E-03	2.00E-03	4.04E-03	1.03E-03	8.92E-02	1.98E-02	1.52E-03	7.42E-04	8.67E-05	7.97E-05
Nitrate	5.24E-04	2.78E-04	4.83E-03	7.76E-04	2.90E-03	4.89E-04	8.86E-04	3.07E-04	1.78E-04	9.01E-05	1.70E-04	9.01E-05
Nitrate/Nitrite	4.80E-05	3.66E-05	4.42E-04	1.02E-04	2.66E-04	6.43E-05	3.52E-05	2.68E-05	1.35E-05	1.03E-05	1.55E-05	1.18E-05
Oxychlordane	2.73E-05	1.53E-05	4.65E-06	2.67E-06	2.70E-06	1.54E-06	6.64E-05	3.58E-05	1.99E-06	1.31E-06	7.42E-09	7.19E-09
Pentachloroanisole	2.60E-03	9.57E-04	4.43E-04	1.67E-04	2.58E-04	9.61E-05	6.19E-03	2.21E-03	1.86E-04	8.14E-05	9.03E-07	4.71E-07
Pentachlorophenol	1.22E+00	4.13E-01	2.10E-01	7.25E-02	1.22E-01	4.17E-02	3.57E+00	1.48E+00	1.09E-01	5.53E-02	9.11E-04	3.22E-04
Perchlorate	3.05E-02	1.36E-02	1.90E-02	8.75E-03	1.12E-02	5.15E-03	1.45E-03	2.70E-04	1.36E-03	9.32E-04	4.54E-03	2.12E-03
Selenium	1.66E-01	1.53E-01	2.98E-01	2.57E-01	1.68E-01	1.45E-01	2.86E-01	2.71E-01	2.07E-02	1.69E-02	2.75E-01	2.32E-01
Silver	0.00E+00	0.00E+00	5.07E-03	3.91E-03	2.85E-03	2.20E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.53E-03	8.43E-04
Strontium	1.68E-03	7.72E-04	8.36E-04	4.75E-04	4.40E-04	2.32E-04	2.38E-03	1.15E-03	4.02E-04	2.50E-04	1.39E-04	7.61E-05
Thallium	6.89E-02	4.06E-02	1.26E+01	3.08E+00	7.36E+00	1.74E+00	5.05E-02	2.98E-02	1.94E-02	1.14E-02	6.76E-01	5.93E-01
trans-Nonachlor	4.87E-05	2.34E-05	8.29E-06	4.04E-06	4.82E-06	2.33E-06	1.18E-04	5.70E-05	3.46E-06	2.03E-06	1.96E-08	3.77E-09
Vanadium	4.47E-01	2.73E-01	2.30E-01	1.93E-01	6.46E-02	4.63E-02	1.71E+00	1.27E+00	8.95E-02	8.01E-02	2.14E-03	1.82E-03
Zinc	1.09E-01	1.01E-01	6.72E-02	3.44E-02	3.87E-02	1.95E-02	2.25E-01	2.08E-01	8.51E-03	4.90E-03	3.18E-02	2.83E-02
Additive COPEC Groups:												
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane):	2.06E-04	1.03E-04	3.51E-05	1.79E-05	2.04E-05	1.03E-05	4.87E-04	2.54E-04	1.44E-05	9.10E-06	7.94E-08	2.14E-08
DDX (4,4'-DDD, -DDE, -DDT):	7.42E-03	2.64E-03	1.42E-03	5.36E-04	8.18E-04	3.04E-04	1.57E-02	6.17E-03	4.85E-04	2.31E-04	1.19E-04	6.09E-05
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268):	1.90E-01	7.67E-02	1.58E-01	3.66E-02	9.21E-02	2.08E-02	4.04E-01	1.77E-01	1.35E-02	7.05E-03	5.72E-03	4.45E-03
Phthalates (bis-2ethylhexyl and butylbenzyl):	3.97E-04	2.34E-04	5.26E-03	1.46E-03	3.15E-03	8.88E-04	2.91E-04	1.71E-04	1.12E-04	6.58E-05	1.29E-04	7.56E-05
Aldrin/Dieldrin/Endrin:	1.01E-02	4.98E-03	8.95E-03	6.78E-03	5.12E-03	3.86E-03	2.23E-02	1.21E-02	7.36E-04	4.70E-04	1.74E-02	1.09E-03

See notes on last page.

Table 7-28
Wildlife NOAEL-Based EEQs for All Food Chain Receptors
Low Impact Sub-Area/Goose Prairie Creek Watershed

	River Otter		Townsend's Big-Eared Bat		Bank Swallow		American Woodcock		Belted Kingfisher		Red-tailed Hawk	
COPEC	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*
2,3,7,8-TCDD TEQ	**2.11E+01**	**1.72E+00**	2.70E-03	1.66E-03	1.34E-01	3.02E-02	7.77E-01	3.12E-01	**1.28E+01**	1.89E-01	8.17E-01	9.08E-02
4,4'-DDD	3.64E-06	1.80E-06	1.05E-05	1.72E-06	5.82E-02	3.06E-02	9.65E-01	3.19E-01	1.52E-02	1.74E-03	1.31E-02	5.75E-03
4,4'-DDE	4.28E-06	2.16E-06	2.49E-04	3.23E-05	5.47E-03	2.27E-03	1.44E-01	6.00E-02	0.00E+00	0.00E+00	1.69E-03	1.15E-03
4,4'-DDT	9.62E-06	4.45E-06	1.67E-05	2.29E-06	1.41E-01	8.56E-02	**1.59E+00**	4.41E-01	3.95E-02	4.50E-03	3.00E-02	7.77E-03
Aldrin	8.64E-07	4.56E-07	4.75E-07	2.62E-07	NA	NA	NA	NA	NA	NA	NA	NA
alpha-Chlordane	7.59E-08	3.57E-08	2.48E-07	3.93E-08	1.31E-05	6.33E-06	3.44E-04	1.67E-04	0.00E+00	0.00E+00	4.62E-06	2.96E-06
Aluminum	**2.04E+01**	**1.32E+01**	1.72E-01	1.16E-01	**1.82E+01**	**1.59E+01**	1.91E-03	1.58E-03	**8.05E+00**	9.32E-01	1.73E-03	1.43E-03
Antimony	6.79E-04	2.67E-04	2.67E-02	9.24E-03	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242	4.14E-05	1.93E-05	5.47E-04	1.91E-05	5.59E-04	2.68E-04	1.47E-02	7.08E-03	0.00E+00	0.00E+00	1.97E-04	1.25E-04
Aroclor 1248	1.93E-05	9.21E-06	1.58E-05	9.13E-06	5.89E-04	2.89E-04	1.55E-02	7.64E-03	0.00E+00	0.00E+00	2.07E-04	1.35E-04
Aroclor 1254	1.34E-02	1.82E-03	4.00E-05	1.07E-05	2.66E-01	4.77E-02	4.60E-02	2.15E-02	1.10E-01	2.75E-03	5.54E-04	2.15E-04
Aroclor 1260	1.69E-04	5.91E-05	3.74E-05	2.36E-06	3.34E-03	1.05E-03	8.78E-02	2.77E-02	0.00E+00	0.00E+00	1.80E-03	8.55E-04
Aroclor 1268	1.15E-05	6.04E-06	4.92E-04	3.76E-04	3.13E-04	1.68E-04	8.22E-03	4.44E-03	0.00E+00	0.00E+00	1.24E-04	8.86E-05
Barium	1.00E-01	6.52E-02	0.00E+00	0.00E+00	**1.25E+00**	**1.10E+00**	0.00E+00	0.00E+00	5.51E-01	6.45E-02	0.00E+00	0.00E+00
Benzoic Acid	1.57E-05	6.61E-06	4.09E-03	2.51E-03	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	2.96E-02	5.94E-03	2.09E-04	1.01E-04	5.24E-03	3.08E-03	2.19E-03	1.29E-03	**4.15E+00**	1.50E-01	2.67E-01	7.27E-02
Cadmium	3.75E-03	3.66E-04	2.74E-02	1.96E-02	1.56E-01	3.76E-02	8.46E-01	7.42E-01	5.30E-02	7.74E-04	5.60E-03	3.25E-03
Chlordane	3.78E-08	1.96E-08	1.24E-07	2.16E-08	6.53E-06	3.47E-06	1.71E-04	9.17E-05	0.00E+00	0.00E+00	2.30E-06	1.63E-06
Chromium	9.97E-04	1.68E-04	1.34E-01	8.44E-03	1.83E-01	1.59E-02	**4.93E+00**	5.58E-01	0.00E+00	0.00E+00	9.83E-02	2.74E-02
cis-Nonachlor	4.99E-08	2.40E-08	1.63E-07	2.65E-08	8.62E-06	4.26E-06	2.26E-04	1.12E-04	0.00E+00	0.00E+00	3.04E-06	1.99E-06
Copper	1.08E-01	1.34E-02	2.75E-02	2.14E-02	6.18E-02	1.69E-02	2.78E-02	2.67E-02	2.45E-01	5.76E-03	1.46E-02	2.64E-03
Dieldrin	7.36E-04	4.65E-04	1.14E-03	1.26E-05	9.87E-03	8.41E-03	4.57E-03	2.45E-03	4.22E-03	4.80E-04	6.33E-05	4.49E-05
Endrin	2.92E-06	1.86E-06	8.56E-06	4.34E-06	6.62E-05	3.30E-05	1.74E-03	8.71E-04	0.00E+00	0.00E+00	7.63E-04	6.58E-04
Hexachlorobenzene	2.54E-06	1.25E-06	3.89E-06	2.35E-06	NA	NA	NA	NA	NA	NA	NA	NA
Lead	2.77E-02	5.23E-03	1.52E-02	1.16E-02	**1.96E+00**	3.27E-01	**1.49E+00**	**1.34E+00**	7.20E-01	2.88E-02	2.97E-02	1.07E-02
Manganese	8.97E-02	6.50E-03	8.01E-02	4.59E-02	1.07E-03	9.59E-04	3.84E-02	3.46E-02	6.84E-02	8.85E-04	5.17E-03	1.09E-03
Mercury (inorganic)	4.91E-06	2.92E-06	4.55E-04	3.53E-04	4.48E-03	4.33E-03	1.19E-01	1.15E-01	0.00E+00	0.00E+00	3.83E-04	3.17E-04
Mercury (methyl)	4.42E-02	1.15E-02	0.00E+00	0.00E+00	**5.14E+00**	**1.65E+00**	0.00E+00	0.00E+00	**2.36E+00**	1.16E-01	0.00E+00	0.00E+00
Mirex	4.50E-06	2.14E-06	1.25E-05	8.68E-07	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	1.44E-05	8.18E-06	8.84E-04	6.66E-04	2.05E-03	4.11E-04	5.47E-02	1.18E-02	0.00E+00	0.00E+00	2.62E-04	2.09E-04
Nitrate	2.70E-02	2.99E-03	2.76E-04	1.20E-04	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	2.47E-03	3.93E-04	2.53E-05	1.58E-05	NA	NA	NA	NA	NA	NA	NA	NA
Oxychlordane	3.55E-08	1.93E-08	7.57E-08	6.01E-08	5.94E-06	3.32E-06	1.56E-04	8.77E-05	0.00E+00	0.00E+00	2.16E-06	1.60E-06
Pentachloroanisole	3.40E-06	1.21E-06	9.22E-06	3.93E-06	9.41E-06	3.45E-06	2.47E-04	9.12E-05	0.00E+00	0.00E+00	3.45E-06	1.68E-06
Pentachlorophenol	1.63E-03	5.35E-04	9.29E-03	2.69E-03	4.41E-03	1.49E-03	1.16E-01	3.93E-02	0.00E+00	0.00E+00	1.65E-03	7.40E-04
Perchlorate	4.39E-06	5.93E-07	4.63E-02	1.77E-02	2.32E-05	1.68E-06	6.61E-04	5.91E-05	0.00E+00	0.00E+00	1.85E-05	3.64E-06
Selenium	8.07E-02	5.12E-02	7.45E-02	5.46E-02	1.41E-01	1.20E-01	3.65E-02	3.38E-02	4.65E-01	5.30E-02	1.88E-02	1.55E-02
Silver	5.34E-04	3.03E-04	0.00E+00	0.00E+00	9.47E-02	7.30E-02	0.00E+00	0.00E+00	4.19E-02	4.28E-03	0.00E+00	0.00E+00
Strontium	7.23E-06	3.23E-06	1.42E-03	6.35E-04	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	**5.31E+01**	3.47E-01	3.63E-02	1.75E-02	3.90E-01	3.45E-01	4.86E-04	2.86E-04	**9.62E+00**	2.37E-02	6.05E-01	1.84E-03
trans-Nonachlor	6.12E-08	2.86E-08	2.00E-07	3.15E-08	1.06E-05	5.07E-06	2.78E-04	1.34E-04	0.00E+00	0.00E+00	3.73E-06	2.38E-06
Vanadium	3.47E-04	2.24E-04	2.19E-02	1.52E-02	5.60E-04	2.52E-04	3.19E-02	2.29E-02	0.00E+00	0.00E+00	9.87E-04	9.19E-04
Zinc	4.34E-02	1.33E-02	2.23E-02	1.63E-02	**2.20E+00**	5.55E-01	**2.82E+00**	**2.63E+00**	**4.60E+00**	2.41E-01	2.81E-01	1.18E-01
Additive COPEC Groups:												
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane):	2.60E-07	1.27E-07	8.10E-07	1.79E-07	4.47E-05	2.24E-05	1.18E-03	5.93E-04	0.00E+00	0.00E+00	1.58E-05	1.06E-05
DDX (4,4'-DDD, -DDE, -DDT):	1.76E-05	8.41E-06	2.77E-04	3.63E-05	2.04E-01	1.18E-01	**2.70E+00**	8.21E-01	5.47E-02	6.24E-03	4.48E-02	1.47E-02
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268):	1.36E-02	1.91E-03	1.13E-03	4.17E-04	2.71E-01	4.95E-02	1.72E-01	6.84E-02	1.10E-01	2.75E-03	2.88E-03	1.42E-03
Phthalates (bis-2ethylhexyl and butylbenzyl):	2.96E-02	5.94E-03	2.09E-04	1.01E-04	5.24E-03	3.08E-03	2.19E-03	1.29E-03	**4.15E+00**	1.50E-01	2.67E-01	7.27E-02
Aldrin/Dieldrin/Endrin:	7.40E-04	4.67E-04	1.15E-03	1.72E-05	9.93E-03	8.44E-03	6.31E-03	3.32E-03	4.22E-03	4.80E-04	8.26E-04	7.03E-04

Notes: COPECs with all EEQs = 0 or "not available" (NA) due to missing toxicity values, are not presentec
EEQs equal to or above 1.0 are bolded and shaded

Table 7-29
Wildlife NOAEL-Based EEQs for All Food Chain Receptors
Low Impact Sub-Area/Central Creek Watershed

COPEC	Deer Mouse		Raccoon		Raccoon (Louisiana Black Bear)		Short-tailed Shrew		Red Fox		Muskrat	
	Tier 1	*Tier 2*	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*
2,3,7,8-TCDD TEQ	4.08E+00	1.63E+00	7.36E+00	1.10E+00	4.33E+00	6.41E-01	9.49E+00	3.81E+00	1.01E-01	4.38E-02	6.51E-02	4.11E-02
4,4'-DDD	1.27E-03	4.18E-04	2.18E-04	7.28E-05	1.27E-04	4.19E-05	2.98E-03	1.01E-03	8.87E-05	3.64E-05	1.03E-06	2.05E-07
4,4'-DDE	4.05E-03	1.65E-03	7.58E-04	2.97E-04	4.41E-04	1.71E-04	8.76E-03	3.78E-03	2.48E-04	1.45E-04	2.44E-05	3.87E-06
4,4'-DDT	2.09E-03	5.79E-04	3.62E-04	1.00E-04	2.11E-04	5.79E-05	3.97E-03	1.39E-03	1.49E-04	4.94E-05	1.64E-06	2.74E-07
Aldrin	6.99E-04	3.80E-04	1.18E-04	6.55E-05	6.88E-05	3.78E-05	1.77E-03	9.13E-04	5.13E-05	3.21E-05	4.65E-08	3.14E-08
alpha-Chlordane	6.03E-05	2.92E-05	1.03E-05	5.04E-06	5.98E-06	2.90E-06	1.37E-04	6.73E-05	4.03E-06	2.40E-06	2.43E-08	4.71E-09
Aluminum	9.50E-01	6.46E-01	1.82E+02	1.52E+02	1.03E+02	8.56E+01	6.97E-01	4.74E-01	2.67E-01	1.82E-01	3.57E+01	2.95E+01
Antimony	2.95E-01	7.12E-02	6.86E-02	2.45E-02	3.55E-02	1.05E-02	6.20E-01	1.89E-01	3.25E-02	1.88E-02	2.62E-03	1.11E-03
Aroclor 1242	3.33E-02	1.58E-02	5.79E-03	2.73E-03	3.37E-03	1.58E-03	7.59E-02	3.67E-02	2.25E-03	1.31E-03	5.36E-05	2.29E-06
Aroclor 1248	1.53E-02	7.55E-03	2.60E-03	1.30E-03	1.51E-03	7.52E-04	3.45E-02	1.71E-02	1.01E-03	6.09E-04	1.55E-06	1.09E-06
Aroclor 1254	4.56E-02	2.12E-02	7.69E-03	3.61E-03	4.48E-03	2.08E-03	1.04E-01	4.90E-02	2.85E-03	1.19E-03	3.92E-06	1.28E-06
Aroclor 1260	8.71E-02	2.74E-02	1.49E-02	4.82E-03	8.68E-03	2.79E-03	1.69E-01	6.35E-02	6.71E-03	3.49E-03	3.66E-06	2.82E-07
Aroclor 1268	8.44E-03	4.67E-03	1.58E-03	9.46E-04	9.20E-04	5.46E-04	2.00E-02	1.09E-02	6.64E-04	4.52E-04	4.82E-05	4.50E-05
Barium	0.00E+00	0.00E+00	9.40E-01	8.39E-01	5.29E-01	4.72E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.75E+00	3.98E-01
Benzoic Acid	1.30E-02	6.45E-03	3.43E-03	2.03E-03	2.01E-03	1.18E-03	9.00E-03	4.58E-03	3.78E-04	2.57E-04	4.01E-04	3.01E-04
Cadmium	4.78E-01	4.19E-01	1.32E-01	8.56E-02	7.70E-02	4.98E-02	1.09E+00	9.67E-01	2.28E-02	1.71E-02	3.60E-02	3.23E-02
Chlordane	3.01E-05	1.60E-05	5.12E-06	2.77E-06	2.98E-06	1.59E-06	7.20E-05	4.66E-05	2.12E-06	1.66E-06	1.21E-08	2.58E-09
Chromium	6.37E-01	6.03E-02	1.55E-01	2.05E-02	8.76E-02	8.82E-03	1.25E+00	1.55E-01	5.55E-02	1.28E-02	1.31E-02	1.01E-03
cis-Nonachlor	3.97E-05	1.96E-05	6.76E-06	3.39E-06	3.93E-06	1.95E-06	9.40E-05	4.74E-05	2.76E-06	1.69E-06	1.60E-08	3.17E-09
Copper	5.72E-02	5.50E-02	5.99E-02	2.77E-02	3.41E-02	1.53E-02	9.86E-02	9.49E-02	5.70E-03	4.24E-03	3.08E-02	2.87E-02
Dieldrin	7.29E-03	3.53E-03	1.57E-03	6.15E-04	9.19E-04	3.54E-04	1.56E-02	8.45E-03	5.29E-04	3.09E-04	1.12E-04	1.51E-06
Endrin	2.13E-03	1.06E-03	3.64E-04	1.87E-04	2.11E-04	1.08E-04	4.98E-03	2.76E-03	1.55E-04	1.29E-04	8.39E-07	5.20E-07
Hexachlorobenzene	1.99E-03	1.01E-03	3.38E-04	1.75E-04	1.96E-04	1.01E-04	4.96E-03	2.49E-03	1.47E-04	8.99E-05	3.81E-07	2.81E-07
Lead	7.93E-02	7.16E-02	2.64E-02	2.22E-02	1.25E-02	1.04E-02	1.78E-01	1.60E-01	5.96E-03	5.20E-03	1.54E-03	1.42E-03
Manganese	1.79E-01	1.52E-01	1.01E-01	6.34E-02	4.95E-02	2.83E-02	4.12E-01	3.61E-01	2.07E-02	1.65E-02	8.30E-03	5.81E-03
Mercury (inorganic)	1.79E-03	1.72E-03	5.78E-03	5.54E-03	3.35E-03	3.21E-03	3.48E-03	3.34E-03	9.64E-04	8.89E-04	4.45E-05	4.23E-05
Mercury (methyl)	0.00E+00	0.00E+00	1.53E-01	6.07E-02	8.39E-02	3.04E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.34E-01	2.16E-01
Mirex	3.69E-03	1.80E-03	6.26E-04	3.09E-04	3.65E-04	1.78E-04	8.61E-03	4.18E-03	2.48E-04	1.46E-04	1.23E-06	1.04E-07
Nickel	3.98E-02	8.60E-03	1.18E-02	3.23E-03	6.54E-03	1.55E-03	8.92E-02	1.98E-02	1.52E-03	7.42E-04	2.65E-03	2.34E-03
Nitrate	5.13E-04	2.83E-04	4.73E-03	7.92E-04	2.85E-03	4.99E-04	8.78E-04	3.11E-04	1.75E-04	9.15E-05	1.74E-04	9.56E-05
Nitrate/Nitrite	4.18E-05	3.28E-05	3.85E-04	9.16E-05	2.31E-04	5.77E-05	3.06E-05	2.41E-05	1.18E-05	9.24E-06	1.35E-05	1.06E-05
Oxychlordane	2.73E-05	1.53E-05	4.65E-06	2.67E-06	2.70E-06	1.54E-06	6.64E-05	3.58E-05	1.99E-06	1.31E-06	7.42E-09	7.19E-09
Pentachloroanisole	2.60E-03	9.57E-04	4.43E-04	1.67E-04	2.58E-04	9.61E-05	6.19E-03	2.21E-03	1.86E-04	8.14E-05	9.03E-07	4.71E-07
Pentachlorophenol	1.22E+00	4.13E-01	2.10E-01	7.25E-02	1.22E-01	4.17E-02	3.57E+00	1.48E+00	1.09E-01	5.53E-02	9.11E-04	3.22E-04
Perchlorate	3.05E-02	1.36E-02	1.90E-02	8.75E-03	1.12E-02	5.15E-03	1.45E-03	2.70E-04	1.36E-03	9.32E-04	4.54E-03	2.12E-03
Selenium	1.61E-01	1.48E-01	2.10E-01	1.84E-01	1.18E-01	1.03E-01	2.82E-01	2.67E-01	1.91E-02	1.55E-02	1.80E-01	1.54E-01
Strontium	1.68E-03	7.72E-04	8.36E-04	4.75E-04	4.40E-04	2.32E-04	2.38E-03	1.15E-03	4.02E-04	2.50E-04	1.39E-04	7.61E-05
Thallium	0.00E+00	0.00E+00	3.48E+00	3.00E+00	1.96E+00	1.69E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.63E-01	5.72E-01
trans-Nonachlor	4.87E-05	2.34E-05	8.29E-06	4.04E-06	4.82E-06	2.33E-06	1.18E-04	5.70E-05	3.46E-06	2.03E-06	1.96E-08	3.77E-09
Vanadium	4.95E-01	3.11E-01	6.68E-01	2.98E-01	3.28E-01	1.13E-01	1.75E+00	1.30E+00	1.03E-01	9.07E-02	1.75E-02	1.40E-02
Zinc	1.09E-01	1.01E-01	3.96E-02	2.65E-02	2.28E-02	1.52E-02	2.25E-01	2.08E-01	8.47E-03	4.87E-03	1.92E-02	1.73E-02
Additive COPEC Groups:												
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane):	2.06E-04	1.03E-04	3.51E-05	1.79E-05	2.04E-05	1.03E-05	4.87E-04	2.54E-04	1.44E-05	9.10E-06	7.94E-08	2.14E-08
DDX (4,4'-DDD, -DDE, -DDT):	7.42E-03	2.64E-03	1.34E-03	4.70E-04	7.79E-04	2.71E-04	1.57E-02	6.17E-03	4.85E-04	2.31E-04	2.71E-05	4.35E-06
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268):	1.90E-01	7.67E-02	3.26E-02	1.34E-02	1.90E-02	7.74E-03	4.04E-01	1.77E-01	1.35E-02	7.05E-03	1.11E-04	4.99E-05
Aldrin/Dieldrin/Endrin:	1.01E-02	4.98E-03	2.06E-03	8.68E-04	1.20E-03	5.00E-04	2.23E-02	1.21E-02	7.36E-04	4.70E-04	1.12E-04	2.06E-06

See notes on last page.

Table 7-29
Wildlife NOAEL-Based EEQs for All Food Chain Receptors
Low Impact Sub-Area/Central Creek Watershed

COPEC	River Otter		Townsend's Big-Eared Bat		Bank Swallow		American Woodcock		Belted Kingfisher		Red-tailed Hawk	
	Tier 1	*Tier 2*	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*
2,3,7,8-TCDD TEQ	**3.20E+01**	**2.81E+00**	3.27E-03	2.13E-03	6.21E-01	9.23E-02	7.77E-01	3.12E-01	**1.84E+01**	3.09E-01	**1.16E+00**	1.38E-01
4,4'-DDD	1.72E-06	5.52E-07	1.05E-05	1.72E-06	3.67E-02	1.21E-02	9.65E-01	3.19E-01	0.00E+00	0.00E+00	1.31E-02	5.75E-03
4,4'-DDE	4.56E-06	2.30E-06	2.49E-04	3.23E-05	5.47E-03	2.27E-03	1.44E-01	6.00E-02	0.00E+00	0.00E+00	1.69E-03	1.15E-03
4,4'-DDT	3.95E-06	7.46E-07	1.67E-05	2.29E-06	6.06E-02	1.67E-02	**1.59E+00**	4.41E-01	0.00E+00	0.00E+00	3.00E-02	7.77E-03
Aldrin	9.20E-07	4.86E-07	4.75E-07	2.62E-07	NA	NA	NA	NA	NA	NA	NA	NA
alpha-Chlordane	8.08E-08	3.80E-08	2.48E-07	3.93E-08	1.31E-05	6.33E-06	3.44E-04	1.67E-04	0.00E+00	0.00E+00	4.62E-06	2.96E-06
Aluminum	**2.07E+01**	**1.27E+01**	5.00E-01	2.78E-01	**1.71E+01**	**1.43E+01**	5.57E-03	3.79E-03	**7.60E+00**	8.97E-01	5.04E-03	3.43E-03
Antimony	7.23E-04	2.84E-04	2.67E-02	9.24E-03	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242	4.41E-05	2.06E-05	5.47E-04	1.91E-05	5.59E-04	2.68E-04	1.47E-02	7.08E-03	0.00E+00	0.00E+00	1.97E-04	1.25E-04
Aroclor 1248	2.05E-05	9.81E-06	1.58E-05	9.13E-06	5.89E-04	2.89E-04	1.55E-02	7.64E-03	0.00E+00	0.00E+00	2.07E-04	1.35E-04
Aroclor 1254	5.48E-05	1.53E-05	4.00E-05	1.07E-05	1.75E-03	8.14E-04	4.60E-02	2.15E-02	0.00E+00	0.00E+00	5.54E-04	2.15E-04
Aroclor 1260	1.80E-04	6.30E-05	3.74E-05	2.36E-06	3.34E-03	1.05E-03	8.78E-02	2.77E-02	0.00E+00	0.00E+00	1.80E-03	8.55E-04
Aroclor 1268	1.23E-05	6.43E-06	4.92E-04	3.76E-04	3.13E-04	1.68E-04	8.22E-03	4.44E-03	0.00E+00	0.00E+00	1.24E-04	8.86E-05
Barium	1.05E-01	6.94E-02	0.00E+00	0.00E+00	**1.23E+00**	**1.10E+00**	0.00E+00	0.00E+00	5.45E-01	6.88E-02	0.00E+00	0.00E+00
Benzoic Acid	1.67E-05	7.04E-06	4.09E-03	2.51E-03	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	6.65E-02	2.76E-02	2.77E-02	1.99E-02	1.62E-01	3.75E-02	8.46E-01	7.42E-01	3.98E-01	2.94E-02	2.76E-02	1.63E-02
Chlordane	4.03E-08	2.09E-08	1.24E-07	2.16E-08	6.53E-06	3.47E-06	1.71E-04	9.17E-05	0.00E+00	0.00E+00	2.30E-06	1.63E-06
Chromium	1.06E-03	1.79E-04	1.34E-01	8.44E-03	1.83E-01	1.59E-02	**4.93E+00**	5.58E-01	0.00E+00	0.00E+00	9.83E-02	2.74E-02
cis-Nonachlor	5.32E-08	2.56E-08	1.63E-07	2.65E-08	8.62E-06	4.26E-06	2.26E-04	1.12E-04	0.00E+00	0.00E+00	3.04E-06	1.99E-06
Copper	9.47E-02	1.07E-02	2.75E-02	2.14E-02	3.56E-02	1.00E-02	2.77E-02	2.67E-02	1.97E-01	4.45E-03	1.23E-02	2.10E-03
Dieldrin	9.13E-06	4.74E-06	1.14E-03	1.26E-05	1.74E-04	9.29E-05	4.57E-03	2.45E-03	0.00E+00	0.00E+00	6.33E-05	4.49E-05
Endrin	3.11E-06	1.98E-06	8.56E-06	4.34E-06	6.62E-05	3.30E-05	1.74E-03	8.71E-04	0.00E+00	0.00E+00	7.63E-04	6.58E-04
Hexachlorobenzene	2.71E-06	1.33E-06	3.89E-06	2.35E-06	NA	NA	NA	NA	NA	NA	NA	NA
Lead	1.50E-02	2.63E-03	1.52E-02	1.15E-02	4.73E-02	4.24E-02	**1.49E+00**	**1.34E+00**	2.47E-01	8.25E-03	2.17E-02	8.73E-03
Manganese	1.59E-01	1.03E-02	8.04E-02	4.61E-02	1.11E-03	9.85E-04	3.84E-02	3.46E-02	1.14E-01	1.41E-03	8.09E-03	1.31E-03
Mercury (inorganic)	5.23E-06	3.11E-06	4.55E-04	3.53E-04	4.48E-03	4.33E-03	1.19E-01	1.15E-01	0.00E+00	0.00E+00	3.83E-04	3.17E-04
Mercury (methyl)	1.70E-02	4.89E-03	0.00E+00	0.00E+00	**1.86E+00**	6.61E-01	0.00E+00	0.00E+00	8.55E-01	4.95E-02	0.00E+00	0.00E+00
Mirex	4.80E-06	2.27E-06	1.25E-05	8.68E-07	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	5.29E-04	1.04E-04	8.84E-04	6.66E-04	1.42E-02	2.83E-03	5.47E-02	1.18E-02	5.73E-03	2.30E-04	2.62E-04	2.09E-04
Nitrate	2.81E-02	3.24E-03	2.70E-04	1.22E-04	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	2.29E-03	3.76E-04	2.20E-05	1.41E-05	NA	NA	NA	NA	NA	NA	NA	NA
Oxychlordane	3.78E-08	2.06E-08	7.57E-08	6.01E-08	5.94E-06	3.32E-06	1.56E-04	8.77E-05	0.00E+00	0.00E+00	2.16E-06	1.60E-06
Pentachloroanisole	3.62E-06	1.29E-06	9.22E-06	3.93E-06	9.41E-06	3.45E-06	2.47E-04	9.12E-05	0.00E+00	0.00E+00	3.45E-06	1.68E-06
Pentachlorophenol	1.73E-03	5.69E-04	9.29E-03	2.69E-03	4.41E-03	1.49E-03	1.16E-01	3.93E-02	0.00E+00	0.00E+00	1.65E-03	7.40E-04
Perchlorate	4.67E-06	6.32E-07	4.63E-02	1.77E-02	2.32E-05	1.68E-06	6.61E-04	5.91E-05	0.00E+00	0.00E+00	1.85E-05	3.64E-06
Selenium	1.79E-02	1.14E-02	7.16E-02	5.25E-02	9.46E-02	8.20E-02	3.63E-02	3.36E-02	1.69E-01	2.07E-02	4.64E-03	3.37E-03
Strontium	7.70E-06	3.44E-06	1.42E-03	6.35E-04	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	3.91E-01	2.49E-01	0.00E+00	0.00E+00	3.94E-01	3.40E-01	0.00E+00	0.00E+00	1.74E-01	2.12E-02	0.00E+00	0.00E+00
trans-Nonachlor	6.52E-08	3.04E-08	2.00E-07	3.15E-08	1.06E-05	5.07E-06	2.78E-04	1.34E-04	0.00E+00	0.00E+00	3.73E-06	2.38E-06
Vanadium	**2.61E+00**	4.32E-01	4.69E-02	3.14E-02	1.26E-03	8.07E-04	3.22E-02	2.31E-02	3.82E-01	1.21E-02	2.56E-02	6.50E-03
Zinc	1.73E-03	3.13E-04	2.23E-02	1.62E-02	9.55E-01	2.87E-01	**2.82E+00**	**2.63E+00**	3.65E-01	1.28E-02	4.32E-02	1.56E-02
Additive COPEC Groups:												
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane):	2.77E-07	1.35E-07	8.10E-07	1.79E-07	4.47E-05	2.24E-05	1.18E-03	5.93E-04	0.00E+00	0.00E+00	1.58E-05	1.06E-05
DDX (4,4'-DDD, -DDE, -DDT):	1.02E-05	3.60E-06	2.77E-04	3.63E-05	1.03E-01	3.11E-02	**2.70E+00**	8.21E-01	0.00E+00	0.00E+00	4.48E-02	1.47E-02
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268):	3.12E-04	1.15E-04	1.13E-03	4.17E-04	6.55E-03	2.59E-03	1.72E-01	6.84E-02	0.00E+00	0.00E+00	2.88E-03	1.42E-03
Aldrin/Dieldrin/Endrin:	1.32E-05	7.21E-06	1.15E-03	1.72E-05	2.40E-04	1.26E-04	6.31E-03	3.32E-03	0.00E+00	0.00E+00	8.26E-04	7.03E-04

Notes: COPECs with all EEQs = 0 or "not available" (NA) due to missing toxicity values, are not presented.
EEQs equal to or above 1.0 are bolded and shaded.

Table 7-30
Wildlife NOAEL-Based EEQs for All Food Chain Receptors
Low Impact Sub-Area/Harrison Bayou Watershed

	Deer Mouse		Raccoon		Raccoon (Louisiana Black Bear)		Short-tailed Shrew		Red Fox		Muskrat	
COPEC	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*
2,3,7,8-TCDD TEQ	4.08E+00	1.63E+00	7.06E+00	8.86E-01	4.14E+00	5.16E-01	9.49E+00	3.81E+00	1.01E-01	4.36E-02	1.03E-01	2.95E-02
4,4'-DDD	1.27E-03	4.18E-04	2.18E-04	7.28E-05	1.27E-04	4.19E-05	2.98E-03	1.01E-03	8.87E-05	3.64E-05	1.03E-06	2.05E-07
4,4'-DDE	4.05E-03	1.65E-03	7.58E-04	2.97E-04	4.41E-04	1.71E-04	8.76E-03	3.78E-03	2.48E-04	1.45E-04	2.44E-05	3.87E-06
4,4'-DDT	2.09E-03	5.79E-04	3.62E-04	1.00E-04	2.11E-04	5.79E-05	3.97E-03	1.39E-03	1.49E-04	4.94E-05	1.64E-06	2.74E-07
Aldrin	6.99E-04	3.80E-04	1.18E-04	6.55E-05	6.88E-05	3.78E-05	1.77E-03	9.13E-04	5.13E-05	3.21E-05	4.65E-08	3.14E-08
alpha-Chlordane	6.03E-05	2.92E-05	1.03E-05	5.04E-06	5.98E-06	2.90E-06	1.37E-04	6.73E-05	4.03E-06	2.40E-06	2.43E-08	4.71E-09
Aluminum	3.16E+00	1.74E+00	1.94E+02	1.41E+02	1.10E+02	7.97E+01	2.32E+00	1.28E+00	8.89E-01	4.91E-01	3.86E+01	2.77E+01
Antimony	2.95E-01	7.12E-02	6.86E-02	2.45E-02	3.55E-02	1.05E-02	6.20E-01	1.89E-01	3.25E-02	1.88E-02	2.62E-03	1.11E-03
Aroclor 1242	3.33E-02	1.58E-02	5.79E-03	2.73E-03	3.37E-03	1.58E-03	7.59E-02	3.67E-02	2.25E-03	1.31E-03	5.36E-05	2.29E-06
Aroclor 1248	1.53E-02	7.55E-03	2.60E-03	1.30E-03	1.51E-03	7.52E-04	3.45E-02	1.71E-02	1.01E-03	6.09E-04	1.55E-06	1.09E-06
Aroclor 1254	4.56E-02	2.12E-02	7.69E-03	3.61E-03	4.48E-03	2.08E-03	1.04E-01	4.90E-02	2.85E-03	1.19E-03	3.92E-06	1.28E-06
Aroclor 1260	8.71E-02	2.74E-02	1.49E-02	4.82E-03	8.68E-03	2.79E-03	1.69E-01	6.35E-02	6.71E-03	3.49E-03	3.66E-06	2.82E-07
Aroclor 1268	8.44E-03	4.67E-03	1.58E-03	9.46E-04	9.20E-04	5.46E-04	2.00E-02	1.09E-02	6.64E-04	4.52E-04	4.82E-05	4.50E-05
Barium	0.00E+00	0.00E+00	2.03E+00	1.64E+00	1.15E+00	9.26E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.80E+00	7.81E-01
Benzoic Acid	1.30E-02	6.45E-03	3.43E-03	2.03E-03	2.01E-03	1.18E-03	9.00E-03	4.58E-03	3.78E-04	2.57E-04	4.01E-04	3.01E-04
bis(2-ethylhexyl)phthalate	0.00E+00	0.00E+00	2.57E-03	4.76E-04	1.50E-03	2.68E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.08E-04	8.80E-05
Cadmium	4.77E-01	4.18E-01	9.88E-02	7.75E-02	5.77E-02	4.52E-02	1.09E+00	9.66E-01	2.25E-02	1.69E-02	2.00E-02	1.97E-02
Chlordane	3.01E-05	1.60E-05	5.12E-06	2.77E-06	2.98E-06	1.59E-06	7.20E-05	4.66E-05	2.12E-06	1.66E-06	1.21E-08	2.58E-09
Chromium	6.38E-01	6.12E-02	1.65E-01	2.35E-02	9.36E-02	1.07E-02	1.25E+00	1.56E-01	5.58E-02	1.30E-02	1.35E-02	1.31E-03
cis-Nonachlor	3.97E-05	1.96E-05	6.76E-06	3.39E-06	3.93E-06	1.95E-06	9.40E-05	4.74E-05	2.76E-06	1.69E-06	1.60E-08	3.17E-09
Copper	5.73E-02	5.50E-02	6.84E-02	2.91E-02	3.91E-02	1.61E-02	9.87E-02	9.49E-02	5.73E-03	4.26E-03	3.19E-02	3.00E-02
Dieldrin	7.29E-03	3.53E-03	1.57E-03	6.15E-04	9.19E-04	3.54E-04	1.56E-02	8.45E-03	5.29E-04	3.09E-04	1.12E-04	1.51E-06
Endrin	2.13E-03	1.06E-03	3.64E-04	1.87E-04	2.11E-04	1.08E-04	4.98E-03	2.76E-03	1.55E-04	1.29E-04	8.39E-07	5.20E-07
Hexachlorobenzene	1.99E-03	1.01E-03	3.38E-04	1.75E-04	1.96E-04	1.01E-04	4.96E-03	2.49E-03	1.47E-04	8.99E-05	3.81E-07	2.81E-07
Lead	7.94E-02	7.16E-02	2.74E-02	2.24E-02	1.31E-02	1.06E-02	1.79E-01	1.60E-01	5.98E-03	5.22E-03	1.56E-03	1.44E-03
Manganese	1.81E-01	1.53E-01	1.29E-01	6.64E-02	6.62E-02	3.02E-02	4.13E-01	3.62E-01	2.11E-02	1.68E-02	8.83E-03	6.23E-03
Mercury (inorganic)	1.79E-03	1.72E-03	5.78E-03	5.54E-03	3.35E-03	3.21E-03	3.48E-03	3.34E-03	9.64E-04	8.89E-04	4.45E-05	4.23E-05
Mercury (methyl)	0.00E+00	0.00E+00	1.32E-01	4.45E-02	7.26E-02	2.23E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.16E-01	1.81E-01
Mirex	3.69E-03	1.80E-03	6.26E-04	3.09E-04	3.65E-04	1.78E-04	8.61E-03	4.18E-03	2.48E-04	1.46E-04	1.23E-06	1.04E-07
Nickel	3.98E-02	8.60E-03	1.26E-02	3.46E-03	6.98E-03	1.65E-03	8.92E-02	1.98E-02	1.52E-03	7.42E-04	3.13E-03	2.79E-03
Nitrate	4.41E-04	2.55E-04	4.09E-03	7.18E-04	2.46E-03	4.51E-04	8.25E-04	2.90E-04	1.55E-04	8.36E-05	1.87E-04	1.01E-04
Nitrate/Nitrite	3.46E-02	1.73E-02	3.18E-01	4.83E-02	1.92E-01	3.05E-02	2.54E-02	1.27E-02	9.73E-03	4.88E-03	1.12E-02	5.61E-03
Oxychlordane	2.73E-05	1.53E-05	4.65E-06	2.67E-06	2.70E-06	1.54E-06	6.64E-05	3.58E-05	1.91E-06	1.31E-06	7.42E-09	7.19E-09
Pentachloroanisole	2.60E-03	9.57E-04	4.43E-04	1.67E-04	2.58E-04	9.61E-05	6.19E-03	2.21E-03	1.86E-04	8.14E-05	9.03E-07	4.71E-07
Pentachlorophenol	1.22E+00	4.13E-01	2.10E-01	7.25E-02	1.22E-01	4.17E-02	3.57E+00	1.48E+00	1.09E-01	5.53E-02	9.11E-04	3.22E-04
Perchlorate	3.05E-02	1.36E-02	1.90E-02	8.75E-03	1.12E-02	5.15E-03	1.45E-03	2.70E-04	1.36E-03	9.32E-04	4.54E-03	2.12E-03
Selenium	1.68E-01	1.54E-01	2.31E-01	1.98E-01	1.31E-01	1.12E-01	2.87E-01	2.71E-01	2.11E-02	1.72E-02	1.91E-01	1.59E-01
Strontium	1.68E-03	7.72E-04	8.36E-04	4.75E-04	4.40E-04	2.32E-04	2.38E-03	1.15E-03	4.02E-04	2.50E-04	1.39E-04	7.61E-05
Thallium	3.06E-02	2.38E-02	7.01E+00	2.43E+00	4.06E+00	1.37E+00	2.24E-02	1.74E-02	8.62E-03	6.69E-03	5.68E-01	4.66E-01
trans-Nonachlor	4.87E-05	2.34E-05	8.29E-06	4.04E-06	4.82E-06	2.33E-06	1.18E-04	5.70E-05	3.46E-06	2.03E-06	1.96E-08	3.77E-09
Vanadium	5.35E-01	3.35E-01	1.04E+00	3.64E-01	5.54E-01	1.54E-01	1.78E+00	1.32E+00	1.14E-01	9.73E-02	3.07E-02	2.16E-02
Zinc	1.09E-01	1.01E-01	3.87E-02	2.65E-02	2.23E-02	1.51E-02	2.25E-01	2.08E-01	8.47E-03	4.87E-03	1.86E-02	1.71E-02
Additive COPEC Groups:												
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane):	2.06E-04	1.03E-04	3.51E-05	1.79E-05	2.04E-05	1.03E-05	4.87E-04	2.54E-04	1.43E-05	9.10E-06	7.94E-08	2.14E-08
DDX (4,4'-DDD, -DDE, -DDT):	7.42E-03	2.64E-03	1.34E-03	4.70E-04	7.79E-04	2.71E-04	1.57E-02	6.17E-03	4.85E-04	2.31E-04	2.71E-05	4.35E-06
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268):	1.90E-01	7.67E-02	3.26E-02	1.34E-02	1.90E-02	7.74E-03	4.04E-01	1.77E-01	1.35E-02	7.05E-03	1.11E-04	4.99E-05
Phthalates (bis-2ethylhexyl and butylbenzyl):	0.00E+00	0.00E+00	2.57E-03	4.76E-04	1.50E-03	2.68E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.08E-04	8.80E-05
Aldrin/Dieldrin/Endrin:	1.01E-02	4.98E-03	2.06E-03	8.68E-04	1.20E-03	5.00E-04	2.23E-02	1.21E-02	7.36E-04	4.70E-04	1.12E-04	2.06E-06

See notes on last page.

Table 7-30
Wildlife NOAEL-Based EEQs for All Food Chain Receptors
Low Impact Sub-Area/Harrison Bayou Watershed

	River Otter		Townsend's Big-Eared Bat		Bank Swallow		American Woodcock		Belted Kingfisher		Red-tailed Hawk	
COPEC	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*
2,3,7,8-TCDD TEQ	**4.52E+01**	**3.82E+00**	2.83E-03	1.79E-03	9.71E-01	6.94E-02	8.54E-01	3.12E-01	**1.44E+01**	4.20E-01	8.98E-01	1.04E-01
4,4'-DDD	3.12E-06	1.00E-06	1.05E-05	1.72E-06	3.67E-02	1.21E-02	9.65E-01	3.19E-01	0.00E+00	0.00E+00	1.31E-02	5.75E-03
4,4'-DDE	8.27E-06	4.17E-06	2.49E-04	3.23E-05	5.47E-03	2.27E-03	1.44E-01	6.00E-02	0.00E+00	0.00E+00	1.69E-03	1.15E-03
4,4'-DDT	7.17E-06	1.35E-06	1.67E-05	2.29E-06	6.06E-02	1.67E-02	**1.59E+00**	4.41E-01	0.00E+00	0.00E+00	3.00E-02	7.77E-03
Aldrin	1.67E-06	8.81E-07	4.75E-07	2.62E-07	NA	NA	NA	NA	NA	NA	NA	NA
alpha-Chlordane	1.47E-07	6.89E-08	2.48E-07	3.93E-08	1.31E-05	6.33E-06	3.44E-04	1.67E-04	0.00E+00	0.00E+00	4.62E-06	2.96E-06
Aluminum	**4.11E+01**	**2.19E+01**	**1.66E+00**	7.51E-01	**1.82E+01**	**1.33E+01**	1.85E-02	1.02E-02	**8.15E+00**	**1.52E+00**	1.68E-02	9.26E-03
Antimony	1.31E-03	5.15E-04	2.67E-02	9.24E-03	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242	7.99E-05	3.73E-05	5.47E-04	1.91E-05	5.59E-04	2.68E-04	1.47E-02	7.08E-03	0.00E+00	0.00E+00	1.97E-04	1.25E-04
Aroclor 1248	3.72E-05	1.78E-05	1.58E-05	9.13E-06	5.89E-04	2.89E-04	1.55E-02	7.64E-03	0.00E+00	0.00E+00	2.07E-04	1.35E-04
Aroclor 1254	9.93E-05	2.77E-05	4.00E-05	1.07E-05	1.75E-03	8.14E-04	4.60E-02	2.15E-02	0.00E+00	0.00E+00	5.54E-04	2.15E-04
Aroclor 1260	3.26E-04	1.14E-04	3.74E-05	2.36E-06	3.34E-03	1.05E-03	8.78E-02	2.77E-02	0.00E+00	0.00E+00	1.80E-03	8.55E-04
Aroclor 1268	2.23E-05	1.17E-05	4.92E-04	3.76E-04	3.13E-04	1.68E-04	8.22E-03	4.44E-03	0.00E+00	0.00E+00	1.24E-04	8.86E-05
Barium	4.14E-01	2.47E-01	0.00E+00	0.00E+00	**2.67E+00**	**2.16E+00**	0.00E+00	0.00E+00	**1.18E+00**	2.44E-01	0.00E+00	0.00E+00
Benzoic Acid	3.03E-05	1.28E-05	4.09E-03	2.51E-03	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	5.27E-04	7.14E-05	0.00E+00	0.00E+00	2.37E-01	4.21E-02	0.00E+00	0.00E+00	9.89E-02	4.76E-03	0.00E+00	0.00E+00
Cadmium	2.88E-03	4.12E-04	2.74E-02	1.96E-02	7.55E-02	3.18E-02	8.46E-01	7.42E-01	1.85E-02	5.65E-04	5.60E-03	3.25E-03
Chlordane	7.30E-08	3.78E-08	1.24E-07	2.16E-08	6.53E-06	3.47E-06	1.71E-04	9.17E-05	0.00E+00	0.00E+00	2.30E-06	1.63E-06
Chromium	1.10E-01	2.29E-02	1.35E-01	8.83E-03	1.86E-01	1.83E-02	**4.93E+00**	5.59E-01	**1.55E+00**	1.13E-01	1.98E-01	5.60E-02
cis-Nonachlor	9.64E-08	4.63E-08	1.63E-07	2.65E-08	8.62E-06	4.26E-06	2.26E-04	1.12E-04	0.00E+00	0.00E+00	3.04E-06	1.99E-06
Copper	2.44E-01	2.45E-02	2.76E-02	2.14E-02	3.84E-02	1.10E-02	2.78E-02	2.67E-02	2.77E-01	1.01E-02	1.73E-02	2.57E-03
Dieldrin	1.65E-05	8.60E-06	1.14E-03	1.26E-05	1.74E-04	9.29E-05	4.57E-03	2.45E-03	0.00E+00	0.00E+00	6.33E-05	4.49E-05
Endrin	5.64E-06	3.58E-06	8.56E-06	4.34E-06	6.62E-05	3.30E-05	1.74E-03	8.71E-04	0.00E+00	0.00E+00	7.63E-04	6.58E-04
Hexachlorobenzene	4.91E-06	2.42E-06	3.89E-06	2.35E-06	NA	NA	NA	NA	NA	NA	NA	NA
Lead	3.79E-02	6.58E-03	1.52E-02	1.16E-02	4.77E-02	4.28E-02	**1.49E+00**	**1.34E+00**	3.46E-01	2.07E-02	2.81E-02	1.02E-02
Manganese	5.94E-01	4.08E-02	8.12E-02	4.66E-02	1.23E-03	1.08E-03	3.85E-02	3.47E-02	2.35E-01	5.57E-03	1.58E-02	2.08E-03
Mercury (inorganic)	9.49E-06	5.64E-06	4.55E-04	3.53E-04	4.48E-03	4.33E-03	1.19E-01	1.15E-01	0.00E+00	0.00E+00	3.83E-04	3.17E-04
Mercury (methyl)	2.68E-02	6.51E-03	0.00E+00	0.00E+00	**1.61E+00**	4.85E-01	0.00E+00	0.00E+00	7.40E-01	6.59E-02	0.00E+00	0.00E+00
Mirex	8.70E-06	4.12E-06	1.25E-05	8.68E-07	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	1.12E-03	2.22E-04	8.84E-04	6.66E-04	1.64E-02	3.30E-03	5.47E-02	1.18E-02	6.75E-03	4.97E-04	2.62E-04	2.09E-04
Nitrate	4.38E-02	5.30E-03	2.32E-04	1.10E-04	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	**3.43E+00**	3.59E-01	1.82E-02	7.47E-03	NA	NA	NA	NA	NA	NA	NA	NA
Oxychlordane	6.85E-08	3.73E-08	7.57E-08	6.01E-08	5.94E-06	3.32E-06	1.56E-04	8.77E-05	0.00E+00	0.00E+00	2.16E-06	1.60E-06
Pentachloroanisole	6.56E-06	2.34E-06	9.22E-06	3.93E-06	9.41E-06	3.45E-06	2.47E-04	9.12E-05	0.00E+00	0.00E+00	3.45E-06	1.68E-06
Pentachlorophenol	3.14E-03	1.03E-03	9.29E-03	2.69E-03	4.41E-03	1.49E-03	1.16E-01	3.93E-02	0.00E+00	0.00E+00	1.65E-03	7.40E-04
Perchlorate	8.47E-06	1.15E-06	4.63E-02	1.77E-02	2.32E-05	1.68E-06	6.61E-04	5.91E-05	0.00E+00	0.00E+00	1.85E-05	3.64E-06
Selenium	1.67E-01	1.04E-01	7.52E-02	5.51E-02	9.96E-02	8.40E-02	3.65E-02	3.39E-02	4.42E-01	9.55E-02	2.21E-02	1.81E-02
Strontium	1.40E-05	6.25E-06	1.42E-03	6.35E-04	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	**4.58E+01**	4.86E-01	1.61E-02	1.02E-02	3.32E-01	2.73E-01	2.16E-04	1.67E-04	**4.34E+00**	3.48E-02	2.69E-01	1.08E-03
trans-Nonachlor	1.18E-07	5.52E-08	2.00E-07	3.15E-08	1.06E-05	5.07E-06	2.78E-04	1.34E-04	0.00E+00	0.00E+00	3.73E-06	2.38E-06
Vanadium	**8.77E+00**	**1.27E+00**	6.83E-02	4.16E-02	1.86E-03	1.15E-03	3.24E-02	2.32E-02	7.09E-01	3.56E-02	4.66E-02	9.99E-03
Zinc	2.95E-03	5.57E-04	2.23E-02	1.62E-02	9.02E-01	2.83E-01	**2.82E+00**	**2.63E+00**	3.42E-01	2.28E-02	4.32E-02	1.56E-02
Additive COPEC Groups:												
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane):	5.03E-07	2.45E-07	8.10E-07	1.79E-07	4.47E-05	2.24E-05	1.18E-03	5.93E-04	0.00E+00	0.00E+00	1.58E-05	1.06E-05
DDX (4,4'-DDD, -DDE, -DDT):	1.86E-05	6.52E-06	2.77E-04	3.63E-05	1.03E-01	3.11E-02	**2.70E+00**	8.21E-01	0.00E+00	0.00E+00	4.48E-02	1.47E-02
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268):	5.65E-04	2.09E-04	1.13E-03	4.17E-04	6.55E-03	2.59E-03	1.72E-01	6.84E-02	0.00E+00	0.00E+00	2.88E-03	1.42E-03
Phthalates (bis-2ethylhexyl and butylbenzyl):	5.27E-04	7.14E-05	0.00E+00	0.00E+00	2.37E-01	4.21E-02	0.00E+00	0.00E+00	9.89E-02	4.76E-03	0.00E+00	0.00E+00
Aldrin/Dieldrin/Endrin:	2.39E-05	1.31E-05	1.15E-03	1.72E-05	2.40E-04	1.26E-04	6.31E-03	3.32E-03	0.00E+00	0.00E+00	8.26E-04	7.03E-04

Notes: COPECs with all EEQs = 0 or "not available" (NA) due to missing toxicity values, are not presented.
EEQs equal to or above 1.0 are bolded and shaded.

Table 7-31
Wildlife NOAEL-Based EEQs for All Food Chain Receptors
Low Impact Sub-Area/Saunders Branch Watershed

COPEC	Deer Mouse		Raccoon		Raccoon (Louisiana Black Bear)		Short-tailed Shrew		Red Fox		Muskrat	
	Tier 1	*Tier 2*	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*
2,3,7,8-TCDD TEQ	4.08E+00	1.63E+00	1.84E+00	5.34E-01	1.07E+00	3.05E-01	9.49E+00	3.81E+00	9.97E-02	4.29E-02	5.03E-02	5.00E-02
4,4'-DDD	1.27E-03	4.18E-04	2.18E-04	7.28E-05	1.27E-04	4.19E-05	2.98E-03	1.01E-03	8.87E-05	3.64E-05	1.03E-06	2.05E-07
4,4'-DDE	4.05E-03	1.65E-03	7.58E-04	2.97E-04	4.41E-04	1.71E-04	8.76E-03	3.78E-03	2.48E-04	1.45E-04	2.44E-05	3.87E-06
4,4'-DDT	2.09E-03	5.79E-04	3.62E-04	1.00E-04	2.11E-04	5.79E-05	3.97E-03	1.39E-03	1.49E-04	4.94E-05	1.64E-06	2.74E-07
Aldrin	6.99E-04	3.80E-04	1.18E-04	6.55E-05	6.88E-05	3.78E-05	1.77E-03	9.13E-04	5.13E-05	3.21E-05	4.65E-08	3.14E-08
alpha-Chlordane	6.03E-05	2.92E-05	1.03E-05	5.04E-06	5.98E-06	2.90E-06	1.37E-04	6.73E-05	4.03E-06	2.40E-06	2.43E-08	4.71E-09
Aluminum	0.00E+00	0.00E+00	3.06E+02	2.22E+02	1.72E+02	1.25E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.95E+01	4.28E+01
Antimony	2.86E-01	6.37E-02	5.66E-02	1.49E-02	3.34E-02	8.77E-03	5.56E-01	1.32E-01	2.82E-02	1.49E-02	2.62E-03	1.11E-03
Aroclor 1242	3.33E-02	1.58E-02	5.79E-03	2.73E-03	3.37E-03	1.58E-03	7.59E-02	3.67E-02	2.25E-03	1.31E-03	5.36E-05	2.29E-06
Aroclor 1248	1.53E-02	7.55E-03	2.60E-03	1.30E-03	1.51E-03	7.52E-04	3.45E-02	1.71E-02	1.01E-03	6.09E-04	1.55E-06	1.09E-06
Aroclor 1254	4.56E-02	2.12E-02	7.69E-03	3.61E-03	4.48E-03	2.08E-03	1.04E-01	4.90E-02	2.85E-03	1.19E-03	3.92E-06	1.28E-06
Aroclor 1260	8.71E-02	2.74E-02	1.49E-02	4.82E-03	8.68E-03	2.79E-03	1.69E-01	6.35E-02	6.71E-03	3.49E-03	3.66E-06	2.82E-07
Aroclor 1268	8.44E-03	4.67E-03	1.58E-03	9.46E-04	9.20E-04	5.46E-04	2.00E-02	1.09E-02	6.64E-04	4.52E-04	4.82E-05	4.50E-05
Barium	0.00E+00	0.00E+00	1.14E+00	8.80E-01	6.40E-01	4.95E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.12E+00	4.18E-01
Benzoic Acid	1.30E-02	6.45E-03	3.43E-03	2.03E-03	2.01E-03	1.18E-03	9.00E-03	4.58E-03	3.78E-04	2.57E-04	4.01E-04	3.01E-04
bis(2-ethylhexyl)phthalate	0.00E+00	0.00E+00	2.79E-03	4.64E-04	1.63E-03	2.62E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E-04	8.58E-05
Cadmium	4.77E-01	4.18E-01	1.01E-01	7.74E-02	5.88E-02	4.52E-02	1.09E+00	9.66E-01	2.25E-02	1.69E-02	2.16E-02	1.85E-02
Chlordane	3.01E-05	1.60E-05	5.12E-06	2.77E-06	2.98E-06	1.59E-06	7.20E-05	4.66E-05	2.12E-06	1.66E-06	1.21E-08	2.58E-09
Chromium	6.37E-01	6.03E-02	1.55E-01	2.05E-02	8.76E-02	8.82E-03	1.25E+00	1.55E-01	5.55E-02	1.28E-02	1.31E-02	1.01E-03
cis-Nonachlor	3.97E-05	1.96E-05	6.76E-06	3.39E-06	3.93E-06	1.95E-06	9.40E-05	4.74E-05	2.76E-06	1.69E-06	1.60E-08	3.17E-09
Copper	5.69E-02	5.47E-02	5.74E-02	2.86E-02	3.23E-02	1.56E-02	9.84E-02	9.47E-02	5.61E-03	4.18E-03	3.68E-02	3.34E-02
Dieldrin	7.29E-03	3.53E-03	1.57E-03	6.15E-04	9.19E-04	3.54E-04	1.56E-02	8.45E-03	5.29E-04	3.09E-04	1.12E-04	1.51E-06
Endrin	2.13E-03	1.06E-03	3.64E-04	1.87E-04	2.11E-04	1.08E-04	4.98E-03	2.76E-03	1.55E-04	1.29E-04	8.39E-07	5.20E-07
Hexachlorobenzene	1.99E-03	1.01E-03	3.38E-04	1.75E-04	1.96E-04	1.01E-04	4.96E-03	2.49E-03	1.47E-04	8.99E-05	3.81E-07	2.81E-07
Lead	7.92E-02	7.15E-02	2.54E-02	2.19E-02	1.19E-02	1.02E-02	1.78E-01	1.60E-01	5.94E-03	5.18E-03	1.51E-03	1.40E-03
Manganese	1.78E-01	1.51E-01	1.76E-01	8.26E-02	8.78E-02	3.57E-02	4.11E-01	3.61E-01	2.02E-02	1.62E-02	8.26E-02	5.31E-02
Mercury (inorganic)	1.79E-03	1.72E-03	5.78E-03	5.54E-03	3.35E-03	3.21E-03	3.48E-03	3.34E-03	9.64E-04	8.89E-04	4.45E-05	4.23E-05
Mercury (methyl)	0.00E+00	0.00E+00	1.28E-01	4.20E-02	7.02E-02	2.10E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.11E-01	1.75E-01
Mirex	3.69E-03	1.80E-03	6.26E-04	3.09E-04	3.65E-04	1.78E-04	8.61E-03	4.18E-03	2.48E-04	1.46E-04	1.23E-06	1.04E-07
Nickel	3.98E-02	8.60E-03	1.26E-02	3.30E-03	6.99E-03	1.58E-03	8.92E-02	1.98E-02	1.52E-03	7.42E-04	3.08E-03	2.47E-03
Nitrate	5.33E-05	1.92E-05	5.26E-04	6.01E-05	3.14E-04	3.65E-05	5.41E-04	1.17E-04	4.55E-05	1.72E-05	7.57E-05	3.06E-05
Oxychlordane	2.73E-05	1.53E-05	4.65E-06	2.67E-06	2.70E-06	1.54E-06	6.64E-05	3.58E-05	1.99E-06	1.31E-06	7.42E-09	7.19E-09
Pentachloroanisole	2.60E-03	9.57E-04	4.43E-04	1.67E-04	2.58E-04	9.61E-05	6.19E-03	2.21E-03	1.86E-04	8.14E-05	9.03E-07	4.71E-07
Pentachlorophenol	1.22E+00	4.12E-01	2.06E-01	7.01E-02	1.21E-01	4.13E-02	3.54E+00	1.46E+00	1.07E-01	5.38E-02	9.11E-04	3.22E-04
Perchlorate	3.05E-02	1.36E-02	1.90E-02	8.75E-03	1.12E-02	5.15E-03	1.45E-03	2.70E-04	1.36E-03	9.32E-04	4.54E-03	2.12E-03
Selenium	1.61E-01	1.48E-01	2.11E-01	1.62E-01	1.18E-01	9.09E-02	2.82E-01	2.67E-01	1.91E-02	1.55E-02	2.62E-01	1.64E-01
Strontium	1.68E-03	7.72E-04	8.36E-04	4.75E-04	4.40E-04	2.32E-04	2.38E-03	1.15E-03	4.02E-04	2.50E-04	1.39E-04	7.61E-05
trans-Nonachlor	4.87E-05	2.34E-05	8.29E-06	4.04E-06	4.82E-06	2.33E-06	1.18E-04	5.70E-05	3.46E-06	2.03E-06	1.96E-08	3.77E-09
Vanadium	4.47E-01	2.73E-01	2.89E+00	8.75E-01	1.49E+00	3.28E-01	1.71E+00	1.27E+00	8.95E-02	8.01E-02	1.05E+00	8.84E-01
Zinc	1.09E-01	1.01E-01	4.45E-02	2.77E-02	2.56E-02	1.58E-02	2.25E-01	2.08E-01	8.47E-03	4.87E-03	2.26E-02	2.02E-02
Additive COPEC Groups:												
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane):	2.06E-04	1.03E-04	3.51E-05	1.79E-05	2.04E-05	1.03E-05	4.87E-04	2.54E-04	1.44E-05	9.10E-06	7.94E-08	2.14E-08
DDX (4,4'-DDD, -DDE, -DDT):	7.42E-03	2.64E-03	1.34E-03	4.70E-04	7.79E-04	2.71E-04	1.57E-02	6.17E-03	4.85E-04	2.31E-04	2.71E-05	4.35E-06
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268):	1.90E-01	7.67E-02	3.26E-02	1.34E-02	1.90E-02	7.74E-03	4.04E-01	1.77E-01	1.35E-02	7.05E-03	1.11E-04	4.99E-05
Phthalates (bis-2ethylhexyl and butylbenzyl):	0.00E+00	0.00E+00	2.79E-03	4.64E-04	1.63E-03	2.62E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E-04	8.58E-05
Aldrin/Dieldrin/Endrin:	1.01E-02	4.98E-03	2.06E-03	8.68E-04	1.20E-03	5.00E-04	2.23E-02	1.21E-02	7.36E-04	4.70E-04	1.12E-04	2.06E-06

See notes on last page.

Table 7-31
Wildlife NOAEL-Based EEQs for All Food Chain Receptors
Low Impact Sub-Area/Saunders Branch Watershed

COPEC	River Otter		Townsend's Big-Eared Bat		Bank Swallow		American Woodcock		Belted Kingfisher		Red-tailed Hawk	
	Tier 1	*Tier 2*	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*
2,3,7,8-TCDD TEQ	7.57E-02	1.25E-02	1.34E-03	7.56E-04	4.95E-01	1.12E-01	7.77E-01	3.12E-01	1.94E-01	3.58E-03	5.52E-04	3.76E-04
4,4'-DDD	9.86E-07	3.16E-07	1.05E-05	1.72E-06	3.67E-02	1.21E-02	9.65E-01	3.19E-01	0.00E+00	0.00E+00	1.31E-02	5.75E-03
4,4'-DDE	2.61E-06	1.32E-06	2.49E-04	3.23E-05	5.47E-03	2.27E-03	1.44E-01	6.00E-02	0.00E+00	0.00E+00	1.69E-03	1.15E-03
4,4'-DDT	2.26E-06	4.27E-07	1.67E-05	2.29E-06	6.06E-02	1.67E-02	**1.59E+00**	4.41E-01	0.00E+00	0.00E+00	3.00E-02	7.77E-03
Aldrin	5.27E-07	2.78E-07	4.75E-07	2.62E-07	NA	NA	NA	NA	NA	NA	NA	NA
alpha-Chlordane	4.63E-08	2.17E-08	2.48E-07	3.93E-08	1.31E-05	6.33E-06	3.44E-04	1.67E-04	0.00E+00	0.00E+00	4.62E-06	2.96E-06
Aluminum	**1.96E+01**	**1.05E+01**	0.00E+00	0.00E+00	**2.88E+01**	**2.09E+01**	0.00E+00	0.00E+00	**1.27E+01**	7.47E-01	0.00E+00	0.00E+00
Antimony	4.14E-04	1.63E-04	2.67E-02	9.24E-03	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242	2.52E-05	1.18E-05	5.47E-04	1.91E-05	5.59E-04	2.68E-04	1.47E-02	7.08E-03	0.00E+00	0.00E+00	1.97E-04	1.25E-04
Aroclor 1248	1.18E-05	5.62E-06	1.58E-05	9.13E-06	5.89E-04	2.89E-04	1.55E-02	7.64E-03	0.00E+00	0.00E+00	2.07E-04	1.35E-04
Aroclor 1254	3.14E-05	8.75E-06	4.00E-05	1.07E-05	1.75E-03	8.14E-04	4.60E-02	2.15E-02	0.00E+00	0.00E+00	5.54E-04	2.15E-04
Aroclor 1260	1.03E-04	3.61E-05	3.74E-05	2.36E-06	3.34E-03	1.05E-03	8.78E-02	2.77E-02	0.00E+00	0.00E+00	1.80E-03	8.55E-04
Aroclor 1268	7.04E-06	3.68E-06	4.92E-04	3.76E-04	3.13E-04	1.68E-04	8.22E-03	4.44E-03	0.00E+00	0.00E+00	1.24E-04	8.86E-05
Barium	7.31E-02	4.17E-02	0.00E+00	0.00E+00	**1.49E+00**	**1.15E+00**	0.00E+00	0.00E+00	6.60E-01	4.13E-02	0.00E+00	0.00E+00
Benzoic Acid	9.57E-06	4.03E-06	4.09E-03	2.51E-03	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	1.81E-04	2.20E-05	0.00E+00	0.00E+00	2.57E-01	4.11E-02	0.00E+00	0.00E+00	1.07E-01	1.47E-03	0.00E+00	0.00E+00
Cadmium	1.04E-03	1.24E-04	2.74E-02	1.96E-02	8.28E-02	3.14E-02	8.46E-01	7.42E-01	2.16E-02	1.58E-04	5.60E-03	3.25E-03
Chlordane	2.31E-08	1.19E-08	1.24E-07	2.16E-08	6.53E-06	3.47E-06	1.71E-04	9.17E-05	0.00E+00	0.00E+00	2.30E-06	1.63E-06
Chromium	6.08E-04	1.03E-04	1.34E-01	8.44E-03	1.83E-01	1.59E-02	**4.93E+00**	5.58E-01	0.00E+00	0.00E+00	9.83E-02	2.74E-02
cis-Nonachlor	3.04E-08	1.46E-08	1.63E-07	2.65E-08	8.62E-06	4.26E-06	2.26E-04	1.12E-04	0.00E+00	0.00E+00	3.04E-06	1.99E-06
Copper	2.51E-03	5.09E-04	2.73E-02	2.13E-02	5.24E-02	1.38E-02	2.77E-02	2.67E-02	2.25E-02	5.17E-04	6.21E-04	3.61E-04
Dieldrin	5.23E-06	2.72E-06	1.14E-03	1.26E-05	1.74E-04	9.29E-05	4.57E-03	2.45E-03	0.00E+00	0.00E+00	6.33E-05	4.49E-05
Endrin	1.78E-06	1.13E-06	8.56E-06	4.34E-06	6.62E-05	3.30E-05	1.74E-03	8.71E-04	0.00E+00	0.00E+00	7.63E-04	6.58E-04
Hexachlorobenzene	1.55E-06	7.63E-07	3.89E-06	2.35E-06	NA	NA	NA	NA	NA	NA	NA	NA
Lead	4.97E-03	7.42E-04	1.51E-02	1.15E-02	4.68E-02	4.20E-02	**1.49E+00**	**1.34E+00**	1.43E-01	2.31E-03	1.51E-02	6.79E-03
Manganese	6.45E-03	9.91E-04	7.96E-02	4.56E-02	4.68E-02	8.07E-03	3.84E-02	3.46E-02	2.18E-02	4.11E-04	7.81E-04	6.55E-04
Mercury (inorganic)	3.00E-06	1.78E-06	4.55E-04	3.53E-04	4.48E-03	4.33E-03	1.19E-01	1.15E-01	0.00E+00	0.00E+00	3.83E-04	3.17E-04
Mercury (methyl)	8.16E-03	1.94E-03	0.00E+00	0.00E+00	**1.56E+00**	4.58E-01	0.00E+00	0.00E+00	7.15E-01	1.96E-02	0.00E+00	0.00E+00
Mirex	2.75E-06	1.30E-06	1.25E-05	8.68E-07	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	3.57E-04	6.30E-05	8.84E-04	6.66E-04	1.65E-02	2.98E-03	5.47E-02	1.18E-02	6.78E-03	1.40E-04	2.62E-04	2.09E-04
Nitrate	1.67E-03	1.26E-04	2.80E-05	8.29E-06	NA	NA	NA	NA	NA	NA	NA	NA
Oxychlordane	2.16E-08	1.18E-08	7.57E-08	6.01E-08	5.94E-06	3.32E-06	1.56E-04	8.77E-05	0.00E+00	0.00E+00	2.16E-06	1.60E-06
Pentachloroanisole	2.07E-06	7.40E-07	9.22E-06	3.93E-06	9.41E-06	3.45E-06	2.47E-04	9.12E-05	0.00E+00	0.00E+00	3.45E-06	1.68E-06
Pentachlorophenol	9.92E-04	3.26E-04	9.29E-03	2.69E-03	4.41E-03	1.49E-03	1.15E-01	3.89E-02	0.00E+00	0.00E+00	1.61E-03	7.18E-04
Perchlorate	2.68E-06	3.62E-07	4.63E-02	1.77E-02	2.32E-05	1.68E-06	6.61E-04	5.91E-05	0.00E+00	0.00E+00	1.85E-05	3.64E-06
Selenium	1.04E-02	5.53E-03	7.16E-02	5.25E-02	9.54E-02	6.92E-02	3.63E-02	3.36E-02	1.70E-01	9.96E-03	4.64E-03	3.37E-03
Strontium	4.41E-06	1.97E-06	1.42E-03	6.35E-04	NA	NA	NA	NA	NA	NA	NA	NA
trans-Nonachlor	3.73E-08	1.74E-08	2.00E-07	3.15E-08	1.06E-05	5.07E-06	2.78E-04	1.34E-04	0.00E+00	0.00E+00	3.73E-06	2.38E-06
Vanadium	1.69E-01	3.05E-02	2.19E-02	1.52E-02	2.48E-01	4.63E-02	3.19E-02	2.29E-02	1.18E-01	2.64E-03	9.87E-04	9.19E-04
Zinc	1.30E-03	2.32E-04	2.23E-02	1.62E-02	**1.25E+00**	3.50E-01	**2.82E+00**	**2.63E+00**	4.92E-01	9.79E-03	4.32E-02	1.56E-02
Additive COPEC Groups:												
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane):	1.59E-07	7.75E-08	8.10E-07	1.79E-07	4.47E-05	2.24E-05	1.18E-03	5.93E-04	0.00E+00	0.00E+00	1.58E-05	1.06E-05
DDX (4,4'-DDD, -DDE, -DDT):	5.86E-06	2.06E-06	2.77E-04	3.63E-05	1.03E-01	3.11E-02	**2.70E+00**	8.21E-01	0.00E+00	0.00E+00	4.48E-02	1.47E-02
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268):	1.78E-04	6.59E-05	1.13E-03	4.17E-04	6.55E-03	2.59E-03	1.72E-01	6.84E-02	0.00E+00	0.00E+00	2.88E-03	1.42E-03
Phthalates (bis-2ethylhexyl and butylbenzyl):	1.81E-04	2.20E-05	0.00E+00	0.00E+00	2.57E-01	4.11E-02	0.00E+00	0.00E+00	1.07E-01	1.47E-03	0.00E+00	0.00E+00
Aldrin/Dieldrin/Endrin:	7.53E-06	4.13E-06	1.15E-03	1.72E-05	2.40E-04	1.26E-04	6.31E-03	3.32E-03	0.00E+00	0.00E+00	8.26E-04	7.03E-04

Notes: COPECs with all EEQs = 0 or "not available" (NA) due to missing toxicity values, are not presented.
EEQs equal to or above 1.0 are bolded and shaded.

Table 7-32
Wildlife NOAEL-Based EEQs for All Food Chain Receptors
Waste Sub-Area/Central Creek Watershed

	Deer Mouse		Raccoon		Raccoon (Louisiana Black Bear)		Short-tailed Shrew		Red Fox		Muskrat	
COPEC	Tier 1	Tier 2	Tier 1	Tier 2	Tier 1	Tier 2	Tier 1	Tier 2	Tier 1	Tier 2	Tier 1	Tier 2
1,3,5-Trinitrobenzene	3.23E+00	1.18E+00	1.18E+00	3.38E-01	1.67E-01	6.27E-02	9.01E+00	3.86E+00	5.32E-01	5.03E-02	2.07E-01	7.93E-02
1,3-Dinitrobenzene	1.81E+00	7.38E-01	5.57E-01	1.96E-01	7.89E-02	3.64E-02	1.56E+01	8.33E+00	7.56E-01	9.86E-02	8.23E-02	4.29E-02
2,3,7,8-TCDD TEQ	7.57E+01	1.62E+01	1.91E+01	2.69E+00	2.71E+00	4.95E-01	8.18E+01	2.46E+01	8.60E-01	5.26E-02	6.74E-02	4.19E-02
2,4,6-Trinitrotoluene	1.56E+03	4.52E+02	2.83E+02	6.33E+01	3.97E+01	1.16E+01	2.07E+03	6.23E+02	7.01E+01	4.85E+00	5.76E+00	1.45E+00
2,4-Dinitrotoluene	4.63E+00	1.28E+00	1.17E+00	2.69E-01	1.65E-01	4.96E-02	7.35E+02	2.13E+02	2.97E+01	2.03E+00	1.25E-01	4.34E-02
2,6-Dinitrotoluene	8.83E+00	2.86E+00	2.13E+00	6.02E-01	3.01E-01	1.11E-01	9.92E+01	3.02E+01	3.90E+00	2.88E-01	2.09E-01	9.71E-02
4,4'-DDD	5.58E-04	2.38E-04	9.57E-05	3.16E-05	1.35E-05	5.77E-06	1.08E-03	4.41E-04	3.23E-05	3.03E-06	4.51E-07	1.17E-07
4,4'-DDE	1.94E-03	7.85E-04	3.63E-04	1.08E-04	5.11E-05	1.97E-05	5.18E-03	2.28E-03	1.47E-04	1.66E-05	1.17E-05	1.84E-06
4,4'-DDT	2.68E-04	1.07E-04	4.64E-05	1.42E-05	6.52E-06	2.60E-06	6.38E-04	2.79E-04	2.39E-05	1.88E-06	2.09E-07	5.09E-08
alpha-Chlordane	4.65E-05	2.19E-05	7.92E-06	2.89E-06	1.11E-06	5.27E-07	7.94E-05	1.50E-01	2.33E-06	1.02E-03	1.87E-08	3.54E-09
Aluminum	3.57E+01	1.48E+01	1.98E+02	1.23E+02	2.59E+01	2.13E+01	1.29E+02	7.77E+01	6.65E+00	9.70E-01	3.58E+01	2.96E+01
Antimony	1.19E+00	2.88E-01	2.76E-01	7.55E-02	3.45E-02	1.02E-02	8.97E-01	2.57E-01	4.71E-02	4.83E-03	1.05E-02	4.48E-03
Aroclor 1242	3.62E-02	1.38E-02	6.30E-03	1.82E-03	8.87E-04	3.32E-04	7.70E-02	3.03E-02	2.28E-03	2.05E-04	5.84E-05	1.99E-06
Aroclor 1254	6.62E-02	2.70E-02	1.12E-02	3.50E-03	1.57E-03	6.39E-04	1.61E-01	6.49E-02	4.40E-03	2.99E-04	5.70E-06	1.62E-06
Aroclor 1260	3.10E-02	1.30E-02	5.30E-03	1.75E-03	7.46E-04	3.21E-04	7.06E-02	3.11E-02	2.81E-03	3.24E-04	1.30E-06	1.34E-07
Aroclor 1268	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Barium	1.03E+01	1.39E+00	7.15E+00	1.26E+00	9.66E-01	2.05E-01	3.38E+00	2.24E+00	6.28E-01	4.02E-02	3.09E+00	5.18E-01
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.52E-02	2.62E-02	1.69E-03	1.86E-04	0.00E+00	0.00E+00
Cadmium	5.65E-01	5.36E-01	1.48E-01	8.17E-02	2.09E-02	1.51E-02	1.45E+00	1.33E+00	3.41E-02	4.91E-03	3.65E-02	3.29E-02
Chromium	8.36E-01	8.00E-02	2.03E-01	2.08E-02	2.78E-02	2.83E-03	1.85E+00	2.25E-01	8.19E-02	3.50E-03	1.72E-02	1.34E-03
Copper	6.89E-02	6.42E-02	6.53E-02	2.43E-02	8.89E-03	4.20E-03	1.14E-01	1.06E-01	7.93E-03	1.02E-03	3.15E-02	2.92E-02
Endrin	3.39E-03	1.42E-03	5.79E-04	1.90E-04	8.14E-05	3.48E-05	8.82E-03	3.49E-03	2.75E-04	3.09E-05	1.34E-06	6.93E-07
Hexachlorobenzene	1.89E+00	7.94E-01	3.21E-01	1.05E-01	4.51E-02	1.92E-02	2.31E+00	7.68E-01	6.84E-02	5.26E-03	3.63E-04	2.22E-04
HMX	1.40E+00	7.55E-01	5.04E-01	2.46E-01	7.15E-02	4.57E-02	1.88E+00	8.04E-01	1.10E-01	1.28E-02	8.76E-02	6.35E-02
Lead	1.89E-01	1.32E-01	6.09E-02	3.12E-02	6.48E-03	4.43E-03	3.80E-01	3.23E-01	1.33E-02	2.06E-03	2.77E-03	2.16E-03
Manganese	1.55E-03	1.08E-03	2.63E-02	1.95E-03	3.79E-03	3.93E-04	1.14E-03	7.92E-04	4.36E-04	5.76E-05	5.01E-04	3.49E-04
Mercury (inorganic)	2.24E-03	2.08E-03	7.57E-03	5.28E-03	1.05E-03	9.66E-04	4.17E-03	4.00E-03	1.31E-03	2.26E-04	6.20E-05	5.57E-05
Mercury (methyl)	0.00E+00	0.00E+00	1.53E-01	4.63E-02	2.03E-02	7.34E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.34E-01	2.16E-01
Mirex	3.80E-03	1.54E-03	6.46E-04	2.02E-04	9.08E-05	3.70E-05	7.26E-03	3.47E-03	2.09E-04	2.30E-05	1.27E-06	8.90E-08
Nickel	4.20E-02	9.52E-03	1.21E-02	2.62E-03	1.63E-03	4.00E-04	1.10E-01	2.47E-02	1.87E-03	1.75E-04	2.65E-03	2.35E-03
Nitrate	6.64E-04	3.14E-04	4.77E-03	6.14E-04	6.94E-04	1.22E-04	7.36E-04	2.99E-04	1.66E-04	1.71E-05	1.79E-04	9.75E-05
Nitrate/Nitrite	4.18E-05	3.28E-05	3.85E-04	6.99E-05	5.59E-05	1.40E-05	3.06E-05	2.41E-05	1.18E-05	1.75E-06	1.35E-05	1.06E-05
p-Isopropyltoluene	1.14E-03	6.03E-04	2.00E-04	8.39E-05	2.81E-05	1.53E-05	3.28E-03	1.35E-03	1.04E-04	9.94E-06	2.31E-06	1.85E-06
Pentachloroanisole	8.78E-04	3.82E-04	1.50E-04	5.08E-05	2.10E-05	9.27E-06	1.77E-03	8.14E-04	5.32E-05	5.67E-06	3.05E-07	1.88E-07
Perchlorate	1.93E-02	1.55E-02	1.21E-02	7.63E-03	1.73E-03	1.42E-03	4.18E-03	8.87E-04	2.62E-03	3.62E-04	2.92E-03	2.42E-03
Selenium	2.44E-01	2.20E-01	2.42E-01	1.61E-01	3.27E-02	2.85E-02	4.19E-01	3.82E-01	3.21E-02	4.68E-03	1.85E-01	1.58E-01
Strontium	3.86E-03	1.46E-03	1.92E-03	6.83E-04	2.44E-04	1.06E-04	4.52E-03	1.87E-03	7.65E-04	7.72E-05	3.20E-04	1.43E-04
Thallium	0.00E+00	0.00E+00	3.48E+00	2.29E+00	4.74E-01	4.09E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.63E-01	5.72E-01
Vanadium	6.73E-01	3.95E-01	7.60E-01	2.72E-01	8.55E-02	3.07E-02	2.67E+00	1.86E+00	1.51E-01	2.38E-02	1.84E-02	1.46E-02
Zinc	1.11E-01	1.02E-01	4.03E-02	2.04E-02	5.59E-03	3.70E-03	2.14E-01	1.98E-01	7.58E-03	8.42E-04	1.93E-02	1.74E-02
Additive COPEC Groups:												
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT):	1.56E+03	4.53E+02	2.84E+02	6.36E+01	3.99E+01	1.16E+01	2.81E+03	8.36E+02	9.98E+01	6.89E+00	5.89E+00	1.49E+00
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane):	4.65E-05	2.19E-05	7.92E-06	2.89E-06	1.11E-06	5.27E-07	7.94E-05	1.50E-01	2.33E-06	1.02E-03	1.87E-08	3.54E-09
DDX (4,4'-DDD, -DDE, -DDT):	2.77E-03	1.13E-03	5.05E-04	1.53E-04	7.10E-05	2.81E-05	6.90E-03	3.00E-03	2.03E-04	2.15E-05	1.24E-05	2.01E-06
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268):	1.33E-01	5.38E-02	2.28E-02	7.06E-03	3.21E-03	1.29E-03	3.09E-01	1.26E-01	9.48E-03	8.27E-04	6.54E-05	3.75E-06
Phthalates (bis-2ethylhexyl and butylbenzyl):	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.52E-02	2.62E-02	1.69E-03	1.86E-04	0.00E+00	0.00E+00
Aldrin/Dieldrin/Endrin:	3.39E-03	1.42E-03	5.79E-04	1.90E-04	8.14E-05	3.48E-05	8.82E-03	3.49E-03	2.75E-04	3.09E-05	1.34E-06	6.93E-07

See notes on last page.

Table 7-32
Wildlife NOAEL-Based EEQs for All Food Chain Receptors
Waste Sub-Area/Central Creek Watershed

COPEC	River Otter		Townsend's Big-Eared Bat		Bank Swallow		American Woodcock		Belted Kingfisher		Red-tailed Hawk	
	Tier 1	Tier 2	Tier 1	Tier 2	Tier 1	Tier 2	Tier 1	Tier 2	Tier 1	Tier 2	Tier 1	Tier 2
1,3,5-Trinitrobenzene	3.11E-03	1.06E-03	7.85E-01	1.00E-01	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	2.07E-03	7.29E-04	3.12E-01	5.41E-02	3.50E-02	1.27E-02	9.22E-01	3.35E-01	0.00E+00	0.00E+00	7.65E-03	2.01E-03
2,3,7,8-TCDD TEQ	3.20E+01	2.81E+00	9.97E-03	1.34E-03	1.14E+00	1.98E-01	1.44E+01	3.10E+00	1.84E+01	3.09E-01	6.04E-01	3.99E-02
2,4,6-Trinitrotoluene	2.41E+00	6.82E-01	2.18E+01	1.82E+00	4.42E+02	1.28E+02	1.16E+04	3.40E+03	0.00E+00	0.00E+00	9.52E+01	2.01E+01
2,4-Dinitrotoluene	6.04E-03	1.53E-03	4.74E-01	5.48E-02	NA	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	1.18E-02	3.43E-03	7.90E-01	1.23E-01	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDD	7.56E-07	3.14E-07	1.71E-06	1.48E-07	1.61E-02	6.88E-03	4.23E-01	1.82E-01	0.00E+00	0.00E+00	2.98E-03	9.24E-04
4,4'-DDE	2.18E-06	1.09E-06	4.43E-05	2.32E-06	2.62E-03	1.08E-03	6.88E-02	2.86E-02	0.00E+00	0.00E+00	4.17E-04	1.55E-04
4,4'-DDT	5.06E-07	1.39E-07	7.92E-07	6.43E-08	7.75E-03	3.11E-03	2.04E-01	8.20E-02	0.00E+00	0.00E+00	1.98E-03	4.07E-04
alpha-Chlordane	6.22E-08	2.85E-08	7.08E-08	4.46E-09	1.01E-05	4.75E-06	2.65E-04	1.25E-04	0.00E+00	0.00E+00	1.84E-06	6.29E-07
Aluminum	2.07E+01	1.27E+01	4.84E-01	9.21E-02	1.72E+01	1.43E+01	2.26E+00	1.15E+00	7.60E+00	8.97E-01	3.64E-02	1.44E-02
Antimony	2.91E-03	1.15E-03	3.99E-02	5.65E-03	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242	4.80E-05	1.79E-05	2.21E-04	2.52E-06	6.09E-04	2.34E-04	1.60E-02	6.16E-03	0.00E+00	0.00E+00	1.11E-04	3.08E-05
Aroclor 1254	7.96E-05	1.94E-05	2.16E-05	2.05E-06	2.54E-03	1.03E-03	6.68E-02	2.73E-02	0.00E+00	0.00E+00	4.16E-04	7.72E-05
Aroclor 1260	6.40E-05	3.00E-05	4.93E-06	1.70E-07	1.19E-03	5.00E-04	3.12E-02	1.32E-02	0.00E+00	0.00E+00	3.30E-04	1.15E-04
Aroclor 1268	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Barium	1.11E-01	7.07E-02	5.06E+00	1.51E-01	1.27E+00	1.11E+00	1.58E+00	6.17E-01	5.45E-01	6.88E-02	3.36E-02	7.58E-03
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	6.66E-02	2.76E-02	1.21E-02	3.83E-03	1.68E-01	4.53E-02	1.00E+00	9.49E-01	3.98E-01	2.94E-02	1.53E-02	5.10E-03
Chromium	1.39E-03	2.38E-04	6.53E-02	1.69E-03	2.40E-01	2.12E-02	6.47E+00	7.40E-01	0.00E+00	0.00E+00	6.66E-02	1.03E-02
Copper	9.48E-02	1.07E-02	1.29E-02	3.94E-03	3.58E-02	1.01E-02	3.35E-02	3.12E-02	1.97E-01	4.45E-03	6.61E-03	6.60E-04
Endrin	4.95E-06	2.63E-06	5.06E-06	8.74E-07	1.05E-04	4.40E-05	2.77E-03	1.16E-03	0.00E+00	0.00E+00	6.28E-04	2.47E-04
Hexachlorobenzene	2.58E-03	1.05E-03	1.37E-03	2.80E-04	NA	NA	NA	NA	NA	NA	NA	NA
HMX	1.40E-03	5.70E-04	3.32E-01	8.01E-02	NA	NA	NA	NA	NA	NA	NA	NA
Lead	1.50E-02	2.65E-03	1.03E-02	2.67E-03	1.12E-01	7.84E-02	3.75E+00	2.57E+00	2.47E-01	8.25E-03	1.72E-02	4.08E-03
Manganese	1.59E-01	1.03E-02	3.02E-04	7.03E-05	1.11E-04	7.77E-05	4.65E-05	3.24E-05	1.14E-01	1.41E-03	3.77E-03	1.84E-04
Mercury (inorganic)	9.65E-06	5.19E-06	2.35E-04	7.03E-05	5.48E-03	5.13E-03	1.46E-01	1.37E-01	0.00E+00	0.00E+00	3.65E-04	1.49E-04
Mercury (methyl)	1.70E-02	4.89E-03	0.00E+00	0.00E+00	1.86E+00	6.61E-01	0.00E+00	0.00E+00	8.55E-01	4.95E-02	0.00E+00	0.00E+00
Mirex	4.94E-06	1.95E-06	4.80E-06	1.12E-07	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	5.30E-04	1.05E-04	3.41E-04	1.09E-04	1.43E-02	2.87E-03	5.77E-02	1.31E-02	5.73E-03	2.30E-04	1.43E-04	6.53E-05
Nitrate	2.81E-02	3.24E-03	1.21E-04	2.08E-05	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	2.29E-03	3.76E-04	8.16E-06	2.14E-06	NA	NA	NA	NA	NA	NA	NA	NA
p-Isopropyltoluene	1.64E-06	8.42E-07	8.76E-06	2.33E-06	2.24E-06	1.18E-06	5.90E-05	3.12E-05	0.00E+00	0.00E+00	4.46E-07	1.71E-07
Pentachloroanisole	1.22E-06	5.16E-07	1.15E-06	2.37E-07	3.18E-06	1.38E-06	8.34E-05	3.64E-05	0.00E+00	0.00E+00	6.01E-07	1.89E-07
Perchlorate	2.20E-06	7.92E-07	1.10E-02	3.06E-03	1.09E-05	2.11E-06	3.12E-04	7.40E-05	0.00E+00	0.00E+00	4.52E-06	1.29E-06
Selenium	1.82E-02	1.15E-02	4.57E-02	1.33E-02	9.51E-02	8.25E-02	5.26E-02	4.80E-02	1.69E-01	2.07E-02	3.92E-03	1.52E-03
Strontium	1.77E-05	6.50E-06	1.21E-03	1.81E-04	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	3.91E-01	2.49E-01	0.00E+00	0.00E+00	3.94E-01	3.40E-01	0.00E+00	0.00E+00	1.74E-01	2.12E-02	0.00E+00	0.00E+00
Vanadium	2.61E+00	4.32E-01	2.06E-02	5.46E-03	1.48E-03	8.84E-04	4.49E-02	3.01E-02	3.82E-01	1.21E-02	1.34E-02	1.91E-03
Zinc	1.74E-03	3.14E-04	8.53E-03	2.49E-03	9.57E-01	2.88E-01	2.88E+00	2.65E+00	3.65E-01	1.28E-02	2.37E-02	4.51E-03
Additive COPEC Groups:												
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT):	2.42E+00	6.84E-01	2.23E+01	1.88E+00	4.42E+02	1.28E+02	1.16E+04	3.40E+03	0.00E+00	0.00E+00	9.52E+01	2.01E+01
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane):	6.22E-08	2.85E-08	7.08E-08	4.46E-09	1.01E-05	4.75E-06	2.65E-04	1.25E-04	0.00E+00	0.00E+00	1.84E-06	6.29E-07
DDX (4,4'-DDD, -DDE, -DDT):	3.44E-06	1.55E-06	4.68E-05	2.53E-06	2.65E-02	1.11E-02	6.96E-01	2.92E-01	0.00E+00	0.00E+00	5.38E-03	1.49E-03
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268):	1.92E-04	6.73E-05	2.47E-04	4.74E-06	4.34E-03	1.77E-03	1.14E-01	4.66E-02	0.00E+00	0.00E+00	8.57E-04	2.23E-04
Phthalates (bis-2ethylhexyl and butylbenzyl):	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Aldrin/Dieldrin/Endrin:	4.95E-06	2.63E-06	5.06E-06	8.74E-07	1.05E-04	4.40E-05	2.77E-03	1.16E-03	0.00E+00	0.00E+00	6.28E-04	2.47E-04

Notes: COPECs with all EEQs = 0 or "not available" (NA) due to missing toxicity values, are not presented.
EEQs equal to or above 1.0 are bolded and shaded.

Table 7-33
Wildlife NOAEL-Based EEQs for All Food Chain Receptors
Waste Sub-Area/Harrison Bayou Watershed

	Deer Mouse		Raccoon		Raccoon (Louisiana Black Bear)		Short-tailed Shrew		Red Fox		Muskrat	
COPEC	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*
1,3,5-Trinitrobenzene	3.23E+00	1.18E+00	1.18E+00	3.38E-01	1.67E-01	6.27E-02	9.01E+00	3.86E+00	5.32E-01	5.03E-02	2.07E-01	7.93E-02
1,3-Dinitrobenzene	1.81E+00	7.38E-01	5.57E-01	1.96E-01	7.89E-02	3.64E-02	1.56E+01	8.33E+00	7.56E-01	9.86E-02	8.23E-02	4.29E-02
2,3,7,8-TCDD TEQ	7.57E+01	1.62E+01	1.88E+01	2.53E+00	2.66E+00	4.64E-01	8.18E+01	2.46E+01	8.60E-01	5.25E-02	1.05E-01	3.03E-02
2,4,6-Trinitrotoluene	1.56E+03	4.52E+02	2.83E+02	6.33E+01	3.97E+01	1.16E+01	2.07E+03	6.23E+02	7.01E+01	4.85E+00	5.76E+00	1.45E+00
2,4-Dinitrotoluene	4.63E+00	1.28E+00	1.17E+00	2.69E-01	1.65E-01	4.96E-02	7.35E+02	2.13E+02	2.97E+01	2.03E+00	1.25E-01	4.34E-02
2,6-Dinitrotoluene	8.83E+00	2.86E+00	2.13E+00	6.02E-01	3.01E-01	1.11E-01	9.92E+01	3.02E+01	3.90E+00	2.88E-01	2.09E-01	9.71E-02
4,4'-DDD	5.58E-04	2.38E-04	9.57E-05	3.16E-05	1.35E-05	5.77E-06	1.08E-03	4.41E-04	3.23E-05	3.03E-06	4.51E-07	1.17E-07
4,4'-DDE	1.94E-03	7.85E-04	3.63E-04	1.08E-04	5.11E-05	1.97E-05	5.18E-03	2.28E-03	1.47E-04	1.66E-05	1.17E-05	1.84E-06
4,4'-DDT	2.68E-04	1.07E-04	4.64E-05	1.42E-05	6.52E-06	2.60E-06	6.38E-04	2.79E-04	2.39E-05	1.88E-06	2.09E-07	5.09E-08
alpha-Chlordane	4.65E-05	2.19E-05	7.92E-06	2.89E-06	1.11E-06	5.27E-07	7.94E-05	4.28E-05	2.33E-06	2.89E-07	1.87E-08	3.54E-09
Aluminum	3.79E+01	1.59E+01	2.10E+02	1.15E+02	2.76E+01	1.98E+01	1.31E+02	7.85E+01	7.27E+00	1.03E+00	3.86E+01	2.78E+01
Antimony	1.19E+00	2.88E-01	2.76E-01	7.55E-02	3.45E-02	1.02E-02	8.97E-01	2.57E-01	4.71E-02	4.83E-03	1.05E-02	4.48E-03
Aroclor 1242	3.62E-02	1.38E-02	6.30E-03	1.82E-03	8.87E-04	3.32E-04	7.70E-02	3.03E-02	2.28E-03	2.05E-04	5.84E-05	1.99E-06
Aroclor 1254	6.62E-02	2.70E-02	1.12E-02	3.50E-03	1.57E-03	6.39E-04	1.61E-01	6.49E-02	4.40E-03	2.99E-04	5.70E-06	1.62E-06
Aroclor 1260	3.10E-02	1.30E-02	5.30E-03	1.75E-03	7.46E-04	3.21E-04	7.06E-02	3.11E-02	2.81E-03	3.24E-04	1.30E-06	1.34E-07
Barium	1.03E+01	1.39E+00	8.25E+00	1.87E+00	1.12E+00	3.15E-01	3.38E+00	2.24E+00	6.28E-01	4.02E-02	5.14E+00	9.00E-01
bis(2-ethylhexyl)phthalate	0.00E+00	0.00E+00	2.57E-03	3.63E-04	3.62E-04	6.48E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.08E-04	8.80E-05
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.52E-02	2.62E-02	1.69E-03	1.86E-04	0.00E+00	0.00E+00
Cadmium	5.64E-01	5.35E-01	1.15E-01	7.55E-02	1.62E-02	1.40E-02	1.45E+00	1.33E+00	3.39E-02	4.88E-03	2.05E-02	2.03E-02
Chromium	8.37E-01	8.09E-02	2.13E-01	2.30E-02	2.92E-02	3.28E-03	1.85E+00	2.25E-01	8.22E-02	3.55E-03	1.76E-02	1.64E-03
Copper	6.90E-02	6.43E-02	7.38E-02	2.53E-02	1.01E-02	4.39E-03	1.14E-01	1.06E-01	7.97E-03	1.02E-03	3.27E-02	3.05E-02
Endrin	3.39E-03	1.42E-03	5.79E-04	1.90E-04	8.14E-05	3.48E-05	8.82E-03	3.49E-03	2.75E-04	3.09E-05	1.34E-06	6.93E-07
Hexachlorobenzene	1.89E+00	7.94E-01	3.21E-01	1.05E-01	4.51E-02	1.92E-02	2.31E+00	7.68E-01	6.84E-02	5.26E-03	3.63E-04	2.22E-04
HMX	1.40E+00	7.55E-01	5.04E-01	2.46E-01	7.15E-02	4.57E-02	1.88E+00	8.04E-01	1.10E-01	1.28E-02	8.76E-02	6.35E-02
Lead	1.89E-01	1.32E-01	6.18E-02	3.14E-02	6.63E-03	4.47E-03	3.80E-01	3.23E-01	1.33E-02	2.06E-03	2.80E-03	2.18E-03
Manganese	3.19E-03	2.36E-03	5.43E-02	4.25E-03	7.82E-03	8.59E-04	2.34E-03	1.73E-03	8.99E-04	1.26E-04	1.03E-03	7.63E-04
Mercury (inorganic)	2.24E-03	2.08E-03	7.57E-03	5.28E-03	1.05E-03	9.66E-04	4.17E-03	4.00E-03	1.31E-03	2.26E-04	6.20E-05	5.57E-05
Mercury (methyl)	0.00E+00	0.00E+00	1.32E-01	3.40E-02	1.76E-02	5.38E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.16E-01	1.81E-01
Mirex	3.80E-03	1.54E-03	6.46E-04	2.02E-04	9.08E-05	3.70E-05	7.26E-03	3.47E-03	2.09E-04	2.30E-05	1.27E-06	8.90E-08
Nickel	4.20E-02	9.52E-03	1.30E-02	2.80E-03	1.74E-03	4.24E-04	1.10E-01	2.47E-02	1.87E-03	1.75E-04	3.07E-03	2.74E-03
Nitrate	5.92E-04	2.86E-04	4.13E-03	5.57E-04	6.00E-04	1.11E-04	6.83E-04	2.78E-04	1.46E-04	1.56E-05	1.93E-04	1.03E-04
Nitrate/Nitrite	3.46E-02	1.73E-02	3.18E-01	3.69E-02	4.63E-02	7.36E-03	2.54E-02	1.27E-02	9.73E-03	9.24E-04	1.12E-02	5.61E-03
p-Isopropyltoluene	1.14E-03	6.03E-04	2.00E-04	8.39E-05	2.81E-05	1.53E-05	3.28E-03	1.35E-03	1.04E-04	9.94E-06	2.31E-06	1.85E-06
Pentachloroanisole	8.78E-04	3.82E-04	1.50E-04	5.08E-05	2.10E-05	9.27E-06	1.77E-03	8.14E-04	5.32E-05	5.67E-06	3.05E-07	1.88E-07
Perchlorate	1.93E-02	1.55E-02	1.21E-02	7.63E-03	1.73E-03	1.42E-03	4.18E-03	8.87E-04	2.62E-03	3.62E-04	2.92E-03	2.42E-03
Selenium	2.51E-01	2.26E-01	2.64E-01	1.72E-01	3.59E-02	3.07E-02	4.24E-01	3.86E-01	3.41E-02	4.99E-03	1.96E-01	1.63E-01
Strontium	3.86E-03	1.46E-03	1.92E-03	6.83E-04	2.44E-04	1.06E-04	4.52E-03	1.87E-03	7.65E-04	7.72E-05	3.20E-04	1.43E-04
Thallium	3.06E-02	2.38E-02	7.01E+00	1.85E+00	9.81E-01	3.31E-01	2.24E-02	1.74E-02	8.62E-03	1.27E-03	5.68E-01	4.66E-01
Vanadium	7.14E-01	4.19E-01	1.14E+00	3.22E-01	1.40E-01	4.07E-02	2.70E+00	1.88E+00	1.62E-01	2.51E-02	3.16E-02	2.22E-02
Zinc	1.11E-01	1.02E-01	3.94E-02	2.04E-02	5.47E-03	3.69E-03	2.14E-01	1.98E-01	7.58E-03	8.42E-04	1.86E-02	1.72E-02
Additive COPEC Groups:												
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT):	1.56E+03	4.53E+02	2.84E+02	6.36E+01	3.99E+01	1.16E+01	2.81E+03	8.36E+02	9.98E+01	6.89E+00	5.89E+00	1.49E+00
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane):	4.65E-05	2.19E-05	7.92E-06	2.89E-06	1.11E-06	5.27E-07	7.94E-05	4.28E-05	2.33E-06	2.89E-07	1.87E-08	3.54E-09
DDX (4,4'-DDD, -DDE, -DDT):	2.77E-03	1.13E-03	5.05E-04	1.53E-04	7.10E-05	2.81E-05	6.90E-03	3.00E-03	2.03E-04	2.15E-05	1.24E-05	2.01E-06
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268):	1.33E-01	5.38E-02	2.28E-02	7.06E-03	3.21E-03	1.29E-03	3.09E-01	1.26E-01	9.48E-03	8.27E-04	6.54E-05	3.75E-06
Phthalates (bis-2ethylhexyl and butylbenzyl):	0.00E+00	0.00E+00	2.57E-03	3.63E-04	3.62E-04	6.48E-05	5.52E-02	2.62E-02	1.69E-03	1.86E-04	1.08E-04	8.80E-05
Aldrin/Dieldrin/Endrin:	3.39E-03	1.42E-03	5.79E-04	1.90E-04	8.14E-05	3.48E-05	8.82E-03	3.49E-03	2.75E-04	3.09E-05	1.34E-06	6.93E-07

See notes on last page.

Table 7-33
Wildlife NOAEL-Based EEQs for All Food Chain Receptors
Waste Sub-Area/Harrison Bayou Watershed

	River Otter		Townsend's Big-Eared Bat		Bank Swallow		American Woodcock		Belted Kingfisher		Red-tailed Hawk	
COPEC	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*	*Tier 1*	*Tier 2*
1,3,5-Trinitrobenzene	5.63E-03	1.93E-03	7.85E-01	1.00E-01	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	3.75E-03	1.32E-03	3.12E-01	5.41E-02	3.50E-02	1.27E-02	9.22E-01	3.35E-01	0.00E+00	0.00E+00	7.65E-03	2.01E-03
2,3,7,8-TCDD TEQ	**4.52E+01**	**3.82E+00**	9.81E-03	1.29E-03	**1.49E+00**	1.75E-01	**1.44E+01**	**3.10E+00**	**1.44E+01**	4.20E-01	4.69E-01	3.02E-02
2,4,6-Trinitrotoluene	**4.38E+00**	**1.24E+00**	**2.18E+01**	**1.82E+00**	**4.42E+02**	**1.28E+02**	**1.16E+04**	**3.40E+03**	0.00E+00	0.00E+00	**9.52E+01**	**2.01E+01**
2,4-Dinitrotoluene	1.10E-02	2.78E-03	4.74E-01	5.48E-02	NA	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	2.14E-02	6.22E-03	7.90E-01	1.23E-01	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDD	1.37E-06	5.70E-07	1.71E-06	1.48E-07	1.61E-02	6.88E-03	4.23E-01	1.82E-01	0.00E+00	0.00E+00	2.98E-03	9.24E-04
4,4'-DDE	3.96E-06	1.98E-06	4.43E-05	2.32E-06	2.62E-03	1.08E-03	6.88E-02	2.86E-02	0.00E+00	0.00E+00	4.17E-04	1.55E-04
4,4'-DDT	9.17E-07	2.51E-07	7.92E-07	6.43E-08	7.75E-03	3.11E-03	2.04E-01	8.20E-02	0.00E+00	0.00E+00	1.98E-03	4.07E-04
alpha-Chlordane	1.13E-07	5.17E-08	7.08E-08	4.46E-09	1.01E-05	4.75E-06	2.65E-04	1.25E-04	0.00E+00	0.00E+00	1.84E-06	6.29E-07
Aluminum	**4.11E+01**	**2.19E+01**	9.15E-01	1.64E-01	**1.83E+01**	**1.33E+01**	**2.27E+00**	**1.16E+00**	**8.15E+00**	**1.52E+00**	4.24E-02	1.60E-02
Antimony	5.28E-03	2.09E-03	3.99E-02	5.65E-03	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242	8.70E-05	3.25E-05	2.21E-04	2.52E-06	6.09E-04	2.34E-04	1.60E-02	6.16E-03	0.00E+00	0.00E+00	1.11E-04	3.08E-05
Aroclor 1254	1.44E-04	3.52E-05	2.16E-05	2.05E-06	2.54E-03	1.03E-03	6.68E-02	2.73E-02	0.00E+00	0.00E+00	4.16E-04	7.72E-05
Aroclor 1260	1.16E-04	5.44E-05	4.93E-06	1.70E-07	1.19E-03	5.00E-04	3.12E-02	1.32E-02	0.00E+00	0.00E+00	3.30E-04	1.15E-04
Barium	4.24E-01	2.49E-01	**5.06E+00**	1.51E-01	**2.71E+00**	**2.17E+00**	**1.58E+00**	6.17E-01	**1.18E+00**	2.44E-01	3.36E-02	7.58E-03
bis(2-ethylhexyl)phthalate	5.27E-04	7.14E-05	0.00E+00	0.00E+00	2.37E-01	4.21E-02	0.00E+00	0.00E+00	9.89E-02	4.76E-03	0.00E+00	0.00E+00
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	3.08E-03	5.42E-04	1.20E-02	3.79E-03	8.14E-02	3.97E-02	**1.00E+00**	9.49E-01	1.85E-02	5.65E-04	3.92E-03	1.43E-03
Chromium	1.10E-01	2.30E-02	6.55E-02	1.75E-03	2.43E-01	2.35E-02	**6.47E+00**	7.41E-01	**1.55E+00**	1.13E-01	1.18E-01	1.83E-02
Copper	2.44E-01	2.45E-02	1.30E-02	3.95E-03	3.86E-02	1.11E-02	3.35E-02	3.12E-02	2.77E-01	1.01E-02	9.20E-03	7.95E-04
Endrin	8.98E-06	4.78E-06	5.06E-06	8.74E-07	1.05E-04	4.40E-05	2.77E-03	1.16E-03	0.00E+00	0.00E+00	6.28E-04	2.47E-04
Hexachlorobenzene	4.67E-03	1.90E-03	1.37E-03	2.80E-04	NA	NA	NA	NA	NA	NA	NA	NA
HMX	2.54E-03	1.03E-03	3.32E-01	8.01E-02	NA	NA	NA	NA	NA	NA	NA	NA
Lead	3.81E-02	6.62E-03	1.03E-02	2.68E-03	1.13E-01	7.88E-02	**3.75E+00**	**2.57E+00**	3.46E-01	2.07E-02	2.04E-02	4.49E-03
Manganese	5.94E-01	4.07E-02	6.24E-04	1.53E-04	2.30E-04	1.70E-04	9.59E-05	7.08E-05	2.35E-01	5.57E-03	7.78E-03	4.02E-04
Mercury (inorganic)	1.75E-05	9.42E-06	2.35E-04	7.03E-05	5.48E-03	5.13E-03	1.46E-01	1.37E-01	0.00E+00	0.00E+00	3.65E-04	1.49E-04
Mercury (methyl)	2.68E-02	6.51E-03	0.00E+00	0.00E+00	**1.61E+00**	4.85E-01	0.00E+00	0.00E+00	7.40E-01	6.59E-02	0.00E+00	0.00E+00
Mirex	8.96E-06	3.53E-06	4.80E-06	1.12E-07	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	1.13E-03	2.24E-04	3.41E-04	1.09E-04	1.65E-02	3.34E-03	5.77E-02	1.31E-02	6.75E-03	4.97E-04	1.43E-04	6.53E-05
Nitrate	4.38E-02	5.30E-03	1.07E-04	1.90E-05	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	**3.43E+00**	3.59E-01	6.75E-03	1.13E-03	NA	NA	NA	NA	NA	NA	NA	NA
p-Isopropyltoluene	2.98E-06	1.53E-06	8.76E-06	2.33E-06	2.24E-06	1.18E-06	5.90E-05	3.12E-05	0.00E+00	0.00E+00	4.46E-07	1.71E-07
Pentachloroanisole	2.21E-06	9.36E-07	1.15E-06	2.37E-07	3.18E-06	1.38E-06	8.34E-05	3.64E-05	0.00E+00	0.00E+00	6.01E-07	1.89E-07
Perchlorate	4.00E-06	1.44E-06	1.10E-02	3.06E-03	1.09E-05	2.11E-06	3.12E-04	7.40E-05	0.00E+00	0.00E+00	4.52E-06	1.29E-06
Selenium	1.68E-01	1.04E-01	4.71E-02	1.37E-02	1.00E-01	8.45E-02	5.28E-02	4.82E-02	4.42E-01	9.55E-02	1.29E-02	5.68E-03
Strontium	3.21E-05	1.18E-05	1.21E-03	1.81E-04	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	**4.58E+01**	4.86E-01	5.98E-03	1.55E-03	3.32E-01	2.73E-01	2.16E-04	1.67E-04	**4.34E+00**	3.48E-02	1.39E-01	3.04E-04
Vanadium	**8.77E+00**	**1.27E+00**	2.86E-02	6.99E-03	2.08E-03	1.23E-03	4.51E-02	3.03E-02	7.09E-01	3.56E-02	2.43E-02	2.90E-03
Zinc	2.97E-03	5.59E-04	8.53E-03	2.49E-03	9.04E-01	2.84E-01	**2.88E+00**	**2.65E+00**	3.42E-01	2.28E-02	2.37E-02	4.51E-03
Additive COPEC Groups:												
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT):	**4.39E+00**	**1.24E+00**	**2.23E+01**	**1.88E+00**	**4.42E+02**	**1.28E+02**	**1.16E+04**	**3.40E+03**	0.00E+00	0.00E+00	**9.52E+01**	**2.01E+01**
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane):	1.13E-07	5.17E-08	7.08E-08	4.46E-09	1.01E-05	4.75E-06	2.65E-04	1.25E-04	0.00E+00	0.00E+00	1.84E-06	6.29E-07
DDX (4,4'-DDD, -DDE, -DDT):	6.25E-06	2.81E-06	4.68E-05	2.53E-06	2.65E-02	1.11E-02	6.96E-01	2.92E-01	0.00E+00	0.00E+00	5.38E-03	1.49E-03
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268):	3.47E-04	1.22E-04	2.47E-04	4.74E-06	4.34E-03	1.77E-03	1.14E-01	4.66E-02	0.00E+00	0.00E+00	8.57E-04	2.23E-04
Phthalates (bis-2ethylhexyl and butylbenzyl):	5.27E-04	7.14E-05	0.00E+00	0.00E+00	2.37E-01	4.21E-02	0.00E+00	0.00E+00	9.89E-02	4.76E-03	0.00E+00	0.00E+00
Aldrin/Dieldrin/Endrin:	8.98E-06	4.78E-06	5.06E-06	8.74E-07	1.05E-04	4.40E-05	2.77E-03	1.16E-03	0.00E+00	0.00E+00	6.28E-04	2.47E-04

Notes: COPECs with all EEQs = 0 or "not available" (NA) due to missing toxicity values, are not presented.
EEQs equal to or above 1.0 are bolded and shaded.

8.0 Uncertainty Analysis

The results of the Step 3 portion of the ERA are influenced to some degree by variability and uncertainty. In theory, investigators might reduce variability by increasing sample size of the media or species sampled. Alternatively, uncertainty within the risk analysis can be reduced by using species-specific and site-specific data (i.e., to better quantify contamination of media, vegetation, and prey through direct field measurements, toxicity testing of site-specific media, and field studies using site-specific receptor species). Some detailed media, prey, and receptor field studies can be costly; thus, the analyses of risk have been conducted to limit the use of these resource-intensive techniques, and only the site-specific small mammal uptake study was completed (**Appendix D**). Because assessment criteria were mostly developed based on conservative assumptions, the result of the assessment generally errs on the side of conservatism. This has the effect of maximizing the likelihood of accepting a false positive (Type I error: the rejection of a true null hypothesis) and simultaneously minimizing the likelihood of accepting a true negative (Type II error: the acceptance of a false null hypothesis).

A number of factors contribute to the overall variability and uncertainty inherent in ERAs. Variability is due primarily to measurement error; laboratory media analyses and receptor study design are the major sources of this kind of error. Uncertainty, on the other hand, is associated primarily with deficiency or irrelevancy of effects, exposure, or habitat data to actual ecological conditions at the site. Species physiology, feeding patterns, and nesting behavior are poorly predictable; therefore, toxicity information derived from toxicity testing, field studies, or observation will have uncertainties associated with them. Laboratory studies conducted to obtain site-specific, measured information often suffer from poor relevance to the actual exposure and uptake conditions on site (i.e., bioavailability, exposure, assimilation, etc., are generally greater under laboratory conditions as compared to field conditions). Calculating an estimated value based on a large number of assumptions is often the alternative to the accurate (but costly) method of direct field or laboratory observation, measurement, or testing.

8.1 Representativeness of Environmental Samples

The identification of the types and numbers of environmental samples, sampling procedures, and sample analysis all contain components that contribute to uncertainties in the risk assessment. Decisions regarding the scope of sampling and analysis are often made based on the CSM developed at the planning stages of the investigation. While appropriate planning may minimize the uncertainty associated with these components, some uncertainty will always exist, because the "real" state of the site is unknown prior to sampling and, in fact, may not be fully elucidated even after sampling.

The data used for this Step 3 evaluation includes the following:

- 1,111 total soil (i.e., 0 to 3 feet bgs) samples from the Industrial Sub-Area
- 184 total soil (i.e., 0 to 3 feet bgs) samples from the Low Impact Sub-Area
- 285 total soil (i.e., 0 to 3 feet bgs) samples from the Waste Sub-Area
- 240 surface water samples and 76 sediment samples from the Harrison Bayou watershed
- 304 surface water samples and 124 sediment samples from the Goose Prairie Creek watershed
- 42 surface water samples and 67 sediment samples from the Central Creek watershed
- 9 surface water samples and 19 sediment samples from the Saunders Branch watershed.

Additional surface water and sediment samples were collected from the four watersheds to address data gap concerns. Thus, the amount of data available for the installation-wide risk assessment is considered adequate for purposes of selecting final COPECs at the end of Step 3 and making risk management decisions in Step 8. Furthermore, most of the samples collected at LHAAP over its investigatory history have been biased samples located in areas of known releases. Although the purpose of biased sampling is not to determine which areas of a particular site may be over- or under-represented, biased samples are typically placed in areas of known historical activities, or downgradient of such areas. Therefore, because areas that have likely been impacted are over-represented in the data set and relatively “clean” or un-impacted areas are under-represented relative to their percent of the Installation’s total area (compared with, for example, a dataset that was based on a completely random sampling design), risk has likely been overestimated rather than underestimated at LHAAP.

8.2 Selection of Measurement Receptors

It is possible that the wildlife selected as key receptors in an ERA are not those receptors that have the greatest likelihood of being at risk or are sensitive to a particular chemical. Ecosystem and community level assessment endpoints such as adverse impacts to nutrient cycling, predator-prey relationships, community metabolism, and structural shifts are typically not addressed in ERAs. Uncertainty is associated with the professional judgment used in the selection of key receptors. This uncertainty is reduced by the following considerations:

- Most measurement receptors selected for Step 3 have been confirmed to occur at the installation (exceptions include the Townsend’s Big Eared Bat, and the Louisiana Black Bear, which is represented by the modified Raccoon as a surrogate measurement receptor);

- Both birds and mammals were selected as representative species for most trophic levels in the food chain;
- All trophic levels in the food web are represented by at least one measurement receptor. Organisms at the base of the food chain are evaluated using a direct toxicity approach designed to indicate the potential for population declines.

There is a concern that hazards have been underestimated by not including a rabbit as a measurement receptor because obligate herbivores such as a rabbit would have a greater intake of vegetation compared with any of the selected measurement receptors, all of which have some dietary component other than vegetation (e.g., Deer Mouse). Therefore, an additional analysis of the Deer Mouse hazard was conducted to evaluate possible impacts on a purely herbivorous mammalian receptor. On a body-weight basis the rabbit does have a higher terrestrial vegetation ingestion intake (about 80 percent) compared with the deer mouse, as shown below.

Rabbit vegetation intake (USEPA, 1993) is equal to:

$$\frac{(0.1\ \text{kg/day food intake}) \times (100\ \text{percent vegetation diet})}{1.2\ \text{kg body weight}} = 0.083\ \text{kg/body weight/day}$$

Deer Mouse vegetation intake (**Table 7-19**) is equal to:

$$\frac{(0.00204\ \text{kg/day food intake}) \times (50\ \text{percent vegetation diet})}{0.022\ \text{kg body weight}} = 0.046\ \text{kg/body weight/day}$$

Based on the EEQs estimated for terrestrial measurement receptors (**Section 7.2.5** and **Appendix E**), the Deer Mouse rarely had the greatest EEQ compared with the other terrestrial receptors. However, the Deer Mouse did have the greatest EEQ for barium in soil within the Waste Sub-Area (barium EEQ of 10.3) and 80 percent of this estimated hazard was from terrestrial vegetation intake. If a rabbit had been included as a measurement receptor, this barium EEQ would have been approximately 80 percent greater (10.3 x 1.8) or 19. This finding would not change Step 3 conclusions, as barium is already selected as a final COPEC in soil for Waste Sub-Area (**Section 10.5**).

It should also be noted that, on average, the maximally-exposed terrestrial receptor at each sub-area for each COPEC had an EEQ that was approximately 70 times greater than the Deer Mouse EEQ. Thus, even if a rabbit had been selected as a measurement receptor species, the EEQs would have been slightly less than twice the Deer Mouse EEQs (as described above), but these rabbit EEQs would still have been considerably lower than the maximally-exposed terrestrial receptors already used in the food chain models.

8.3 Protectiveness of Benchmarks and Selection of COPECs

Benchmark values used at the screening step are typically designed to be protective of "most" (e.g., 95%) of the organisms in an ecosystem. However, highly sensitive organisms may exhibit observable effects at sub-benchmark concentrations. Analytical data were available for both the p,p'- and o,p' isomers of DDD, DDE, and DDT in soil in all three terrestrial sub-areas (see **Tables 6-17** through **6-19**). However, only the p,p'-isomers were evaluated in the risk assessment. DDT (generally referring to p,p'-DDT) is a formerly widely-used potent non-systemic ingested and contact insecticide that acts on the nervous system (ATSDR, 2002; HSDB, 2004). The technical product consists of approximately 80 percent of the p,p'-isomer and approximately 20 percent of the o,p'-isomer. The o,p-isomer, however, has been shown to be essentially inactive relative to the p,p'-isomer as an insecticide (ATSDR, 2002). Therefore, toxicity information for the p,p' isomer should not be applied to the o,p'-isomer, i.e., the isomer concentrations should not be added and then evaluated using the p,p' isomer. Because no ecological benchmark or toxicity data are known to exist for the o,p'-isomer, it was decided to limit the evaluation of DDX to data regarding the p,p'-isomer. Excluding o,p'-DDX from the screening level assessment imparts a measure of uncertainty to the assessment, but the uncertainty is expected to be small due to the inactive nature of the o,p' isomer.

Sediment screening values for beryllium, strontium, and vanadium were obtained from LANL (2005) because benchmark values from other sources were not available (see **Table 6-16**). The beryllium (73 mg/kg) and strontium (1,700 mg/kg) benchmarks are based on the protection of a bat species, and the benchmark for vanadium (30 mg/kg) is based on the protection of the violet-green swallow (LANL, 2005). No benchmarks based on the protection of aquatic life (e.g., benthic invertebrates) were located. Therefore, there is some uncertainty regarding the potential of these concentrations to be protective of all aquatic receptors. For informational purposes, water quality benchmarks for these three metals are 0.0053, 1.5, and 0.02 mg/L (TCEQ, 2005). These water quality benchmarks support the finding that strontium is considerably less toxic than either beryllium or vanadium, as reflected by the sediment screening values.

A constituent was excluded as a COPEC for the soil medium if it was a VOC, as VOCs are unlikely to persist in soil long enough to be available for uptake by organisms. However, VOCs in subsurface soil may present a potential risk for burrowing organisms (e.g., shrews) because significant concentrations of volatilized chemicals may be trapped in underground chambers and inhaled. However, toxicity data for the inhalation exposure route are generally lacking for ecological receptors, and this pathway is rarely quantified. The lack of quantification of the inhalation route for VOCs may underestimate hazard for some burrowing receptors.

Sediment COPECs for the direct contact exposure pathway were selected using a weight of evidence approach (**Section 7.1.2**). Those constituents with less than a majority of the available direct contact benchmarks exceeded were generally not selected as COPECs for further consideration, based on an evaluation of the benchmarks. Those constituents that had at least one benchmark exceeded, but not a majority of the benchmarks exceeded, that were not selected as COPECs for further evaluation in a particular watershed included 2,3,7,8-TCDD TEQ, 4,4'-DDD, 4,4'-DDT, Aroclor 1254, dieldrin, and manganese. This results in some uncertainty, but is deemed minimal for the following reasons:

- Although 4,4'-DDD, 4,4'-DDT, Aroclor 1254, and dieldrin were not selected as sediment COPECs in the Goose Prairie Creek watershed, other COPECs were selected for this watershed and BERA field activities (e.g., toxicity tests) were performed on Goose Prairie Creek sediments (Volume II). Therefore, potentially impacted sediments with these four constituents were actually evaluated in the BERA.
- Manganese in the Saunders Branch watershed did not exceed the midpoint sediment PCL.

8.4 Comparison of Detection Limits to Ecological Benchmarks

As discussed in **Section 6.1.2**, analytical methods were evaluated to determine whether they provide adequate data, including adequate quantitative limits on the appropriate contaminants. The laboratory's PQL (i.e., the reporting limit used for LHAAP data) was compared with the minimum and maximum detection limits for each detected chemical in the three sub-areas and the four watersheds, as appropriate. Because much of the data used in the Step 3 evaluation was historical in nature, it was expected that detection limits for several chemicals would exceed benchmark values. The results of the comparison to detection limits are as follows:

- ***Total Soil.*** The detection limits of 13 inorganic analytes, eight nitroaromatic compounds, 11 OC pesticides, and 14 SVOCs were greater than total soil screening values in one or more of the sub areas at LHAAP (**Table 8-1**).
- ***Surface Water.*** The detection limits of ten inorganic analytes, two general chemistry parameters, and two SVOCs were greater than surface water screening values in one or more of the watersheds at LHAAP (**Table 8-2**).
- ***Sediment.*** The detection limits of eight inorganic analytes, one general chemistry parameter, one PCB, three OC pesticides, 18 SVOCs, and five VOCs were greater than sediment screening values in one or more of the watersheds at LHAAP (**Table 8-3**).

Although several chemicals had reporting limits that were elevated in relation to the benchmark screening criterion, analytical methods are able to detect the presence or absence of a chemical and provide a reasonably accurate estimation of its concentration down to the method detection limit (MDL), which is often at least an order of magnitude lower than the PQL. Unfortunately, information regarding the MDL is not available for much of the data used for the Step 3 evaluation. Therefore, there is no way to determine whether analytical methods were truly able to detect chemicals at concentrations equivalent to their ecological benchmark values. However, chemicals present at such low concentrations are unlikely to result in adverse effects at the population-level; therefore, the adequacy of the analytical methods is assumed to be a relatively minor uncertainty in the Step 3 evaluation.

8.5 Removal of Elevated Detection Limits When Calculating Mean and 95 Percent UCLs

As described in **Section 6.1.3.3**, occasionally when 95% UCL values were calculated for a given chemical, the value exceeded the MDC. This generally occurred when chemicals were detected at low frequencies and concentrations, and when non-detected chemicals had elevated reporting limits. For example, if a chemical was detected in a single sample at a "J-qualified" concentration, which may be well below the analytical reporting limit for that chemical, the 95% UCL often exceeded the detected concentration because the bootstrapping statistical procedure incorporated repeated selections of non-detect concentrations, which were assumed to be equal to one-half the reporting limit. Federal risk assessment guidance permits the removal of non-detect sample results if they result in a 95% UCL that exceeds the MDC. The 95% UCL is then recalculated using the remaining data.

For the Step 3 screening evaluation, elevated reporting limits were defined as any reporting limit that exceeded the MDC for chemicals who's 95% UCL was greater than the MDC. Elevated reporting limits were removed for the following chemicals, and 95% UCLs re-calculated based on remaining analytical results:

Soil – Industrial Sub-Area: Molybdenum, thallium, Aroclor 1242, Aroclor 1248, Aroclor 1260, 4,4-DDD, chlordane, dieldrin, endrin, heptachlor, HCB, 1,3-dichlorobenzene, 4-nitrophenol, acetophone, BEHP, carbazole, ethyl methanesulfonate, fluorene, indeno(1,2,3-cd) pyrene, phenol, 1,1-dichlroethene, and ethylbenzene,

Soil - Low-Impact Sub-Area: 2-Methylnapthalene, 4-chloro-3-methylphenol, and benzoic acid.

Soil – Waste Sub-Area: Antimony, HMX, RDX, Aroclor 1242, Aroclor 1254, Aroclor 1260, 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, endrin, and HCB.

Sediment: Thallium in Goose Prairie Creek, and cadmium, selenium, mercury, and BEHP in Saunders Branch.

Surface Water: Thallium in Goose Prairie Creek and Harrison Bayou, and lead in Central Creek.

The elimination of results with elevated reporting limits results in some uncertainty regarding the "true" concentrations of the chemical that were actually present in the eliminated samples. However, because the chemicals to which this approach was applied were, by nature, infrequently detected and present only at low concentrations, any concerns regarding the impact of this approach on determining whether these chemicals adversely affect the environment are minimal.

8.6 Evaluation of Infrequently Detected Chemicals

There is a potential concern that infrequently detected chemicals may have been inappropriately dropped from the COPEC selection process because of the possibility that concentrations of chemicals could have been present in samples at ecologically significant levels, but were not detected due to elevated detection limits. While **Section 8.4** compared detection limits to ecological benchmarks, the current section estimates HQs for those chemicals that were dropped from the COPEC selection process due to a low frequency of detection. **Table 8-4** and **Table 8-5** present the estimated HQs for these chemicals, for total soil and sediment media, respectively (no chemicals were determined to be infrequently detected in surface water samples). For the 17 chemicals determined to be infrequently detected in total soil, HQs could be calculated for eight of them, and these HQs ranged from 1 to 13.75 (with TNT having the greatest HQ). Seven out of the eight HQs were below 4.

For the 18 chemicals determined to be infrequently detected in sediment, HQs ranged from 1.1 to 40.7 (with TNT having the greatest HQ) (**Table 8-5**). Fifteen out of the eighteen HQs were below 6. This finding suggests that infrequently detected chemicals were not dropped inappropriately. Most of the estimated HQs were relatively low, and for TNT (the chemical with the greatest estimated HQ), the detection limits in soil for nondetect samples (e.g., all detection limits were less than or equal to 2.6 mg/kg) were well below the maximum recorded detection, and the detection limits in sediment were also well below the maximum recorded detection (e.g., 59 out of 68 nondetect samples had detection limits less than or equal to 0.5 mg/kg).

8.7 Underestimation of Risk for Small-Range Receptors Through the Use of 95 Percent UCLs

Ninety-five percent UCLs were used as exposure concentrations for all receptors in the Tier 1 food chain models (**Section 7.2**). Use of 95 percent UCL COPEC concentrations in soil from an entire sub-area has the potential to underestimate exposures to those measurement receptors with small home ranges, as they may be exposed to localized areas with elevated COPEC concentrations. Receptors with small home ranges include the Deer Mouse, with a home range of 0.15 acres, and the Short-Tailed Shrew, with a home range of 1.0 acres. These home ranges translate into areas approximately 80 by 80 feet, and 210 by 210 feet, respectively.

To evaluate the potential significance of this uncertainty, a three step process has been used, as illustrated in **Table 8-6**. First, for each COPEC in each sub-area, MDCs have been divided by 95 percent UCLs. A potentially significant bias is indicated if the MDC is more than 50 times the 95 percent UCL, where bias is defined as potentially underestimating the EPC by using the entire sub-area data base, compared with soil samples from a receptor's home range footprint. This ratio was found to exceed the selected criterion of 50 for copper, mercury, selenium, and strontium in the Industrial Sub-Area. No chemicals in the Low Impact or Waste Sub-Areas were found to have this bias. Second, for these identified COPECs, samples with concentrations above the 95 percent UCL were identified and listed (**Table 8-6**), and the average distance between these samples was calculated. Finally, if this average distance was less than 100 feet (which approximates the diameter of the home range for a small-range receptor), this finding would be considered potential evidence of a situation where elevated sample results might adversely impact a receptor more than what is estimated in this Step 3 report. As shown in **Table 8-6**, none of the four COPECs in the Industrial Sub-Area had an average distance between the elevated sample locations that was less than 100 feet; the minimum average distance for these chemicals was 2,200 feet for copper. Therefore, it is unlikely that use of 95 percent UCL COPEC concentrations in soil from an entire sub-area significantly underestimate exposures to measurement receptors with small home ranges.

8.8 Use of Reporting Limit Surrogate Concentrations for Non-Detect COPECs

The approach used in Step 3 was to use one-half of the reporting limit as the surrogate concentration for non-detected COPECs, as opposed to the MDL. This approach was used because many of the historical data sets had only reporting limit data available. As the reporting limit is often ten-fold greater than the MDL, this approach may have overestimated COPEC EPCs by as much as ten-fold for those COPECs with numerous non-detected results.

In the case of the TEQ approach for calculating 2,3,7,8-TCDD equivalent concentrations for all congeners, the use of one-half the reporting limit for non-detected chemicals may result in overly conservative results. This approach may result in over-selection of COPECs, or an overestimation of the source-term concentration for 2,3,7,8-TCDD TEQ, because congeners that would otherwise drop out during the risk-based screening step (or would not be selected for quantitative analysis because they are background-related) if evaluated independently are assumed to be present at a concentration equal to one-half the reporting limit. Thus, if a common but relatively non-toxic congener (e.g., octachlorodiabenzo-p-dioxin) was the only congener detected in a given sample, then the TEQ value used for screening, food chain modeling, etc., may be driven by surrogate values adopted for the more toxic, but undetected, dioxin congeners.

An example is provided below for the calculated 2,3,7,8-TCDD TEQ concentrations in surface water. The MDC, sample location, percentage of the TEQ concentration represented by detected congeners, and the 95 percent UCL concentration for each watershed used in the Step 3 ERA is provided as follows:

2,3,7,8-TCDD TEQ MDC (mg/L)	Sample Location with MDC for each Watershed	TEQ Percentage from Detected Congeners (for the MDC sample)	95 percent UCL Concentration for the Watershed (mg/L)
1.29E-08	29SW30 (GPC)	0.04	8.59E-09
1.22E-08	12SW19 (CC)	0.04	1.22E-08
1.42E-08	18SW27 (HB)	38	9.44E-09

This analysis shows that 2,3,7,8-TCDD TEQ surface water concentrations were likely overestimated to a considerable degree for both Goose Prairie Creek and Central Creek watersheds but were overestimated to a lesser extent for the Harrison Bayou watershed. It should also be noted that 2,3,7,8-TCDD TEQ is selected as a final COPEC in soil for the Waste Sub-Area that is located in the Harrison Bayou watershed.

8.9 Food Chain Model Assumptions

Numerous assumptions regarding the amount of chemical intake by a receptor are commonly made as part of the exposure characterization. Such exposure estimates are associated with a number of uncertainties that relate to the inherent variability of the values for a given parameter (such as body weight) and to uncertainty concerning the representativeness of the assumptions and methods used. Uncertainties associated with chemical intake and exposure include:

- ***Exposure and Intake Factors.*** Point values (e.g., 95 percent UCL) for exposure estimates are commonly used in risk assessments. These point values are usually conservative and their use results in introduction of conservatism into the risk assessment that should be addressed. Use of average values (i.e., central tendency) rather than upper-end exposure and intake factors may underestimate potential health risks since only half the population is exposed to that degree or less; the other half is exposed to a greater degree.

- ***Exposure Point Concentrations.*** Estimating EPCs from the use of 95 percent UCL and mean concentrations is associated with some degree of uncertainty. The 95 percent UCL concentration is used to limit the uncertainty of estimating the true mean concentration from the sample mean concentration. This value may overestimate the true mean concentration. Use of the sample mean concentration may under- or overestimate the true mean concentration.

- ***Uptake factors.*** Food and soil/sediment intake values for most wildlife are either unknown or highly variable and very site-specific. Some food and sediment intake values for key receptors were derived from allometric equations. Determining chemical concentrations in food may require the use of bioconcentration or BAFs. Uncertainty exists in the use of such equations and factors. In particular, the soil-to-mammal uptake factors were also used to estimate uptake into birds that are consumed as prey items in the food chain model. Bioaccumulation of chemicals in bird tissue is unlikely to be the same as in mammals due to differences in physiology, metabolism, digestive mechanisms, etc. However, it is unknown if using a soil-to-mammal BAF over- or under-estimates bioaccumulation in birds. The relevance of this uncertainty on the food chain model results is reduced by the fact that the percentage of birds in the diets of the selected measurement receptors is relatively low (maximum = 15 percent of diet of the Red Fox; see **Table 7-17**).

- ***Quantified Pathways.*** The dermal absorption of chemicals from soil, sediment, or surface water, and the inhalation of chemicals that may have been wind-eroded from soil or volatilized from soil or water was not quantified in Step 3 for the selected measurement receptors. This may have resulted in a slight underestimation of hazard. The greatest potential for exposure to chemicals, however, is likely to result from the ingestion of chemicals in food and from the ingestion of surface water and the incidental ingestion of impacted soil or sediment (while foraging), and these routes of exposure were quantified. Receptor-specific exposures via inhalation or dermal absorption were not selected for further evaluation because of a lack of appropriate exposure data and the expectation that these pathways would be insignificant in comparison to the other exposure pathways quantified for most receptors. Inhalation exposure would be expected to be minimal due to dilution of airborne COPECs in ambient air. Inhalation of VOCs could be significant for burrowing receptors.. Dermal exposure would also be expected to be minimal due to the expectation that wildlife fur or feathers would act to impede the transport of COPECs to the dermal layer. Therefore, the exclusion of these two routes of exposure is not expected to significantly affect report conclusions.

8.10 TRVs

TRVs are developed from literature benchmark values by applying conservative assumptions and are intended to protect sensitive species or populations. Use of non-site-specific, generic TRVs may underestimate risk, but will usually result in overestimates of potential risk. Factors that contribute to uncertainty include:

- Use of UFs in the TRV. TRVs are primarily derived from laboratory animal toxicity studies performed at high doses to which UFs of 10 or more are applied

- Choice of Literature Benchmark Study to Derive a TRV. The inclusion or exclusion of studies in the derivation of a TRV is usually made by professional judgment; this affects the numerical TRV value.

- The Assumption of the Most Sensitive Species. When deriving TRVs, the animal study showing an adverse effect at the lowest exposure or intake level is often the basis for deriving the TRV. USEPA assumes that wildlife receptors are at least as sensitive as the most sensitive laboratory animal used (toxicological data on wildlife are still very limited). The LD_{10} dietary studies probably give a better indication of the toxicity of the chemical tested than ID_{50} studies, while NOAELs from longer studies are the best (still imperfect) laboratory studies to use as predictors of field effects. The potential exists for wildlife species to be more or less sensitive than test species (some biota can adapt) and the toxicological benchmarks used. Various UFs may be used to account for differences in taxonomic levels (i.e., species, genus, order, family) between the test species for the TRV and the key receptor(s) under consideration; however, ecotoxicity values were not be applied across classes.

- Exposure Duration. Actual EDs for key receptors may or may not exceed the test duration periods on which the toxic literature benchmark value and resultant TRV are based. Because mobile receptors are likely to feed or visit several locations or avoid contaminated areas, their daily dose, if averaged over time, could be less than that used for evaluating risk. Unless exposure modifying factors are used, risk is likely to be overestimated.

- Estimation of LOAELs from NOAELs. There is a concern that hazards may have been underestimated for some COPECs when LOAEL-based TRVs were estimated from NOAEL-based TRVs using a UF of 3 or 10 (**Section 7.2.4.4**) (i.e., multiplying the NOAEL-based TRV by 3 or 10). This approach is described in Dourson and Stara (1983). The use of an UF less than 3 or 10 would have resulted in numerically lower LOAEL-based TRVs that would have subsequently resulted in increased LOAEL-based EEQs. The COPECs that had LOAEL-based TRVs estimated using UFs of 3 and 10 are clearly presented in **Table 7-25**.

The risk associated with LHAAP has been generally estimated through a series of quantitative HQ calculations that compare receptor-specific exposure values with TRVs. The EEQs are compared to HQ guidelines for assessing the risk posed from contaminants. It is important to note that the applicable USEPA ERA guidance documents (USEPA 1997a, 1998a) define ERA as "the process that evaluates the likelihood that adverse ecological effects may occur or are occurring as a result of exposure to one or more stressors." As is clear from USEPA guidance (USEPA, 1989b) and numerous other sources (Bartell, 1996; Tannenbaum et al., 2003, Tannenbaum, 2003), the HQ is not a measure of risk. It is rather (only) a measure of a level of concern. To demonstrate, an HQ of 10 does not mean that a receptor has a 10 percent likelihood or chance of developing an adverse ecological effect. The HQ is a unitless measure, unlike the incremental lifetime cancer risk estimate in human health risk assessments that does express the likelihood of an individual developing cancer as an endpoint (and also the probability of excess cancer cases arising in a population). It is also important to note that although HQs are routinely computed in ERAs in the step termed "Risk Characterization," this definition of risk is not met with the HQ computation. Ecological Risk Assessment Guidance for Superfund (USEPA, 1997a) defines "risk" as the expected frequency or probability of undesirable effects resulting from exposure to known or suspected stressors. As illustrated previously, an HQ does not express a frequency or a probability of an occurrence. It is appropriate here to identify additional limitations associated with the HQ method. These limitations can be categorized as those that derive from the HQ's mathematical construct (i.e., the ratio of an estimated intake to an effect or no-effect level), and those that reflect limited exposure and/or toxicity information when crafting the numerator and denominator of the ratio:

HQ method limitations due to mathematical computation:

- The HQ is not a measure of risk
- The HQ is not a population-based measure
- HQs are not linearly scaled

HQ method limitations due to limited exposure and/or toxicity information:

- Extremely low chemical concentrations in environmental media can result in an HQ greater than 1

- HQs are sometimes generated that are unrealistically high and toxicologically improbable or impossible

- HQs are not linked to a temporal scheme (i.e., an HQ of 5 has an identical meaning at a site that is 5 years old as a site that is 500 years old) (Tannenbaum, 2005)

Finally, it is important to note in light of the previous listed limitations, that HQs can only suggest that there is a potential adverse hazard for ecological receptors. Because HQs are only screening tools, they cannot be used to claim that ecological receptors have been or will be harmed. However, due their conservative construct (i.e., HQs likely overestimate rather than underestimate hazard), HQs less than 1 may be confidently interpreted as predicting no adverse ecological impacts at a site. Highly elevated EEQs are biologically implausible, because it is unlikely that an animal can consume a chemical with toxic properties on a daily basis at tens and hundreds of times the safe dose (e.g., the Short-Tailed Shrew had an estimated EEQ of 132 for aluminum in the Industrial Sub-Area/Goose Prairie Creek Watershed [see **Table 7-26**], suggesting that 132-times the safe dose is ingested daily by shrews). If the EEQ were an accurate reflection of hazard to small rodents, it would be expected that populations would be significantly reduced at the site. During the RSA study that was conducted at LHAAP (USACHPPM, 2006), rodents appeared to be abundant throughout the site, including within the Industrial Sub-Area, and there was no noted reduction in the number of rodents trapped at contaminated areas compared with control areas.

TRVs were not identified for some chemicals for measurement receptors that were quantitatively evaluated, particularly for birds (**Table 7-25**). Some of these chemicals may lack TRVs because they are likely to be relatively innocuous (e.g., iron). However, a few are likely to have some degree of toxic properties for wildlife, but adequate data are not available for the development of TRVs. Of the 55 COPECs evaluated in the food chain model, 16, or 29 percent, did not have readily available TRVs. This results in uncertainty because avian EEQs could not be estimated for all the COPECs. However, as mammalian NOAEL TRVs are available for 52 of the 55 COPECs (ninety-five percent), most of the COPECs are evaluated through the use of the food chain models. With the exception of pesticides, mammals tend to be more sensitive to chemical insults than birds; of the 28 COPECs with NOAELs for both birds and mammals, mammal TRVs were lower (more conservative) for 20 of them, including 9 of 15 metals, 1 of 2 nitroaromatics, 3 of 4 SVOCs, perchlorate, dioxin, and all five PCBs. Therefore, because mammals are generally more sensitive to COPECs compared with birds (except for pesticides), the significance of a lack of avian TRVs is considered relatively minor in most instances. The uncertainty of potential impacts to birds from two pesticides that lack avian TRVs (aldrin and mirex) is of somewhat more concern, because concentrations protective of mammals are less likely to be protective for birds for these two chemicals due to higher avian sensitivity to pesticides.

8.11 Potential Effects of Chemical Exposure to Reptiles and Amphibians

Literature sources were queried, but TRVs were not identified for amphibians or reptiles for this ERA (see **Section 7.2.4**). Therefore, no amphibian or reptile measurement receptors could be quantitatively evaluated for exposure in the food chain model, and the impact of exposure to chemicals present in LHAAP media is unknown for these types of organisms. However, some limited information is available in the literature that describes potential effects to reptiles and amphibians from exposure to chemicals that were detected in various media at LHAAP. This information is summarized in the following paragraphs.

Many reptiles and amphibians spend much of their lives in or around water. Some lay their eggs in sediment or shallow pools, where many species spend their early life stages. Therefore, reptiles and amphibians are likely to be highly exposed to chemicals present in aquatic systems. Several metals have been found to be toxic to reptiles and amphibians, particularly during the embryo life stage. Selenium, which was selected as a preliminary COPEC in Harrison Bayou and Goose Prairie Creek surface water, and sediment at all four watersheds (**Table 6-28**), is embryotoxic to many oviparous vertebrates. Eggs and hatchlings of alligators in nests located in areas of elevated selenium have been found to have lower viability compared with reference nests (Roe et al., 2004). Selenium was also noted as a metal that exhibited high accumulation in banded water snakes (Hopkins et al., 2002). However, in spite of high concentrations of selenium and metals accumulated by the snake, no mortality or changes in food consumption, growth, condition factor, overwinter survival, or other biological endpoints was observed, suggesting that snakes may have a relatively high tolerance for exposure to selenium, and possibly other trace elements.

Some metals may impact amphibians (and possibly reptiles) during larval stages and/or hibernation. Lead exposure to amphibians is known to result in decreased hemoglobin levels, damaged erythrocytes, and altered respiratory surfaces. Bullfrog larvae exposed to dissolved lead exhibited lower activity levels and decreased mass compared with controls (Rice et al., 1999). Although the impacts of these responses to populations is not known, affected amphibians could experience higher predation due to slower reactions, or other behavioral or physiological impairments that could affect local abundance. At LHAAP, lead was a COPEC in surface water in all four watersheds, and in Goose Prairie Creek sediment (**Table 6-28**).

Green frog larvae exposed to contaminated sediment from mines and coal combustion waste while overwintering accumulated high concentrations of several metals (lead and zinc in mine sediments; arsenic, selenium, strontium, and vanadium in coal combustion waste sediments) (Snodgrass et al., 2005). Element accumulation was generally correlated with sediment concentrations, as expected, with the exception of cadmium, which was not accumulated by frogs in any of the sediment treatments, and iron and zinc, which were accumulated most in frogs exposed to lower concentrations of these metals. Larvae exposed to the mine sediments experienced reduced growth and size at metamorphosis, and larvae exposed to coal combustion sediments experienced higher mortality rates than controls. Lead, zinc, selenium, and vanadium were all identified as COPECs in at least one watershed at LHAAP (**Table 6-28**).

Although cadmium may not be accumulated by reptiles or amphibians as strongly as some other metals, it can be toxic to these organisms. For example, cadmium has been found to suppress release of acetylcholine and alter oxygen consumption in several amphibian species. Furthermore, cadmium may increase amphibian susceptibility to other stressors in the environment. Cadmium concentrations in water of 0.54 mg/L resulted in decreased survival and metamorphosis in American toad tadpoles (James and Little, 2003; James et al., 2005). However, at low concentrations, cadmium appears to have a hormetic effect; at the three lowest cadmium concentrations tested, tadpoles weighed more and resorbed their tails sooner as concentrations increased. Cadmium was a COPEC in Central Creek surface water at LHAAP. The exposure concentration in this watershed was 0.0025 mg/L, which is within the range of concentrations where hormetic effects were observed (0.001-0.05 mg/L).

Mercury is generally considered a highly toxic metal in aquatic systems due to the tendency of inorganic mercury salts to form methylmercury in water, and subsequently partition to sediment. Mercury was a COPEC in all watershed sediments at LHAAP (**Table 6-28**). A study conducted at LHAAP examined mercury concentrations in cottonmouths (Rainwater et al., 2005), and found that snakes accumulated high concentrations of mercury in their tissues. Mercury was detected in all tissues analyzed, and was detected in highest concentrations in the liver. The liver of the largest cottonmouth sampled contained 8,610 nanograms per gram (ng/g) of mercury, which was the highest concentration of mercury that had been reported for a snake at the time of the article's publication. However, Rainwater et al. (2005) state that the presence of mercury at LHAAP is likely the result of atmospheric deposition from nonpoint-source emissions. Because mercury has been detected in cottonmouths from multiple areas in the southeastern United States, and yet this species appears to remain abundant locally, the authors suggest that snakes may be relatively tolerant to mercury.

Dissolved nitrate and nitrite ions in water may reduce fitness of some amphibians. Some observed responses of newly-hatched amphibian larvae to nitrate and nitrite solutions included reduced feeding activity, less vigorous swimming, disequilibrium, paralysis, and eventually death (Marco et al., 1999). Responses were correlated with nitrate/nitrate concentrations and time of exposure. The nitrate 15-day LC50s ranged from 16.45 mg N-NO_3^-/L to 23.39 mg N-NO_3^-/L for all species. The nitrite 15-day LC50s ranged from 0.57 mg N-NO_2^-/L to 1.75 mg N-NO_2^-/L. Nitrate and/or nitrate/nitrite was a surface water COPEC in all four watersheds, but the maximum exposure concentrations were well below these LC50s for nitrate (0.89 mg/L in Goose Prairie Creek). However, nitrate/nitrite concentrations exceeded these LC50s in Harrison Bayou; the exposure concentration in surface water in this watershed was 58.4 mg/L. Nitrate/nitrite was detected in three out of seven surface water samples from Harrison Bayou, with an MDC of 204 mg/L (**Table 6-20**). However, as the analytical results were for nitrate/nitrite, it is unknown if concentrations of nitrite were actually this elevated.

Although perchlorate was not identified as a COPEC in water in any of the four watersheds at LHAAP, it is a contaminant of concern at the installation and was identified as a COPEC in surface soil. Therefore, there is the possibility of amphibian exposure to this chemical at LHAAP. Goleman et al. (2002) found that *Xenopus* larvae exposed to ammonium perchlorate during 70-day trials experienced elevated mortality due to reduced hatching success. The 5-day and 70-day median LC50s in this study were 510 and 223 mg/L, respectively. Concentration-related developmental abnormalities were not observed at concentrations below the 70-day LC50. The MDC of perchlorate in any watershed at LHAAP was well below these LC50s (0.9 mg/L at Harrison Bayou; **Table 6-20**). Limited data are available describing potential impacts of perchlorate on reptiles. However, a recent study investigating the effects of exposure to sodium perchlorate by eastern fence lizards showed that exposed individuals experienced dose-dependent higher reproductive output; females exposed to sodium perchlorate tended to lay more and larger eggs as concentration increased (Redick-Harris et al., 2005). Other endpoints that were tested (i.e., survival and growth rate) exhibited no or minor association with perchlorate concentrations.

Information regarding the ecotoxicology of reptiles and amphibians to organic chemicals is limited. A study conducted by Texas Tech University (Rainwater et al., 2005) studied the uptake of OC pesticides and mercury in cottonmouth snakes at LHAAP. Results of the study indicated that accumulation of these chemicals takes place in cottonmouths, but correlations between tissue concentrations and soil and sediment concentrations from collection sites were not developed. Larger snakes tended to have higher OC concentrations. However, concentrations of *p,p'*- DDE were lower than those reported for cottonmouths and other snakes in southeastern Texas, and the authors suggest that exposure to OC pesticides at LHAAP is low and likely represents background concentrations. The study served to demonstrate that accumulation of OC pesticides is occurring in snakes at LHAAP, but as the article emphasizes, the paucity of toxicological data prohibits any conclusions about possible impacts of these chemicals. The study does note that cottonmouths appear to be locally abundant at the installation, possibly suggesting a tolerance to low-level contaminant exposures, a theory that was also presented in Hopkins et al. (2002). Tolerance by snakes to organic pesticides was also suggested in a study where water snakes were captured from Texas river sites contaminated with pesticides (Clark et al., 2000). Captured snakes had blood levels of DDE equivalent to the maximum concentration of peregrine falcons when DDE peaked in that species in the late 1970's, but no impacts were observed in the snakes, and one captured female snake was gravid. Although reproductive effects were not studied, one turtle species (red-eared slider) captured in the same location exhibited no adverse body condition impacts (e.g., mass relative to carapace length). Several OC pesticides were detected and identified as COPECs at LHAAP (**Table 6-28**).

The discussion included in the preceding paragraphs is intended to address some of the uncertainty regarding potential risks to reptiles and amphibians (including sensitive species such as the alligator snapping turtle and timber rattlesnake) that occur, or may occur, at the LHAAP installation. These types of organisms are among the least studied groups in ecotoxicology (Campbell and Campbell, 2002). Although it is possible that chemical exposures may be impacting reptiles and amphibians, the information that is available suggests that chemical concentrations in surface water and sediment in the four watersheds represent a relatively low threat to them.

An additional source of uncertainty is potential contamination in vernal pools. Vernal pools are transient water bodies formed during periods of high rain, and are used by some amphibians to lay eggs, particularly in the spring. Juvenile amphibians hatch, grow, and develop in these pools before they evaporate. Therefore, exposure to chemicals in the pools during a sensitive life stage is a possible threat to amphibians. Surface water samples located at least 500 feet away from a permanent water body were not used in the risk assessment because it was assumed that these were transient locations that only formed following heavy rain events. This approach was considered appropriate for two reasons. First, the puddles and small pools were unlikely to be used as a source of drinking water or be useable habitat by most organisms in a regular and sustained manner throughout the year, and it would be inappropriate to combine them with surface water samples collected from areas of more permanent aquatic habitats. Second, although this approach may result in some uncertainty in terms of possible impacts to amphibians who use vernal pools for breeding and rearing young, estimating hazards for these organisms cannot be accurately performed due to the paucity of amphibian toxicological data in the literature. However, the uncertainty associated with not evaluating vernal pools is addressed further in **Section 8.15**.

8.12 Using AUFs Less Than 1 for Large Range Receptors

To address concerns regarding the potential for large-range receptors to be impacted by contamination across multiple sub-areas and/or watersheds, it was intended that an exercise would be run where COPEC EEQs from individual sub-areas would be summed for large-range receptors that may cover multiple sub-areas in their home range. However, the complexity of the food chain models prohibited such an exercise. For example, because nearly all receptors are exposed either directly or indirectly to chemicals in both terrestrial and watershed systems, summing multiple "areas" for whichever terrestrial or aquatic area is targeted also results in summed hazards associated with the non-targeted area. Thus, if the hazard for a hawk exposed directly or indirectly to chemicals in both soil and sediment/surface water is summed across two sub-areas, both of which are also paired with exposure to particular watersheds, then the hazard from the watershed is likely to be overestimated (i.e., "double counted"). The fact that the AUF was conservatively calculated based on the smaller of the watershed or terrestrial sub-area (**Section 7.2.3.5**) adds further complexity to the exercise.

To simplify the process while still achieving the goal of evaluating the exposure without spatial dilution, EEQs were recalculated for each receptor that used an AUF less than 1. AUFs less than 1 were used for only six receptors: Raccoon, Red Fox, River Otter, Townsend's Big-Eared Bat, Belted Kingfisher, and Red-Tailed Hawk. The following table presents AUFs of receptor/tier groups that are less than 1 for each of the sub-area/watershed combinations:

Receptor/Tier[a]	Sub-Area / Watershed[b]							
	IND/GPC	IND/CC	LI/GPC	LI/CC	LI/HB	LI/SB	WA/CC	WA/HB
Raccoon/T2	--	--	--	--	--	--	0.76	0.76
Fox/T2	0.98	0.91	--	--	--	--	0.19	0.19
Otter/T1	0.34	0.36	0.34	0.36	0.65	0.21	0.36	0.65
Otter/T2	0.25	0.27	0.25	0.27	0.48	0.15	0.27	0.48
Bat/T1	--	--	--	--	--	--	0.37	0.37
Bat/T2	0.59	0.59	0.82	0.82	0.82	0.82	0.12	0.12
Kingfisher/T2	0.13	0.14	0.13	0.14	0.26	0.08	0.14	0.26
Hawk/T1	--	--	--	--	--	--	0.52	0.52
Hawk/T2	--	--	--	--	--	--	0.28	0.28

Notes and Abbreviations:
[a] *T1 - Tier 1 analysis*
T2 - Tier 2 analysis
[b] *Sub-Area and watershed combination*
*--	AUF of 100 percent used in initial evaluation*
*IND	Industrial Sub-Area*
*LI	Low Impact Sub-Area*
*WA	Waste Sub-Area*
*GPC	Goose Prairie Creek Watershed*
*CC	Central Creek Watershed*
*HB	Harrison Bayou Watershed*
*SB	Saunders Branch Watershed*

The following subsections describe key changes in receptor hazard calculations for the above receptor/tier groups using an AUF set to 1. Chemicals whose EEQs are still below 1 using an AUF of 1 are not discussed. Only those COPEC EEQs that were originally below 1, but exceeded 1 when the AUF value was set to 1, are discussed.

Industrial Sub-Area/Goose Prairie Creek Watershed

Using an AUF set to 1, the following EEQs increased from less than 1 to greater than 1:

- The Tier 1 River Otter NOAEL-EEQs for barium increased from 0.62 to 1.8
- The Tier 2 River Otter NOAEL-EEQs for thallium increased from 0.35 to 1.4
- The Tier 2 Belted Kingfisher NOAEL-EEQs for 2,3,7,8-TCDD TEQ, aluminum, BEHP, zinc, and total phthalates increased to greater than 1 (2,3,7,8-TCDD TEQ: 0.19 to 1.4, aluminum: 0.93 to 7, BEHP: 0.15 to 1.1, zinc: 0.24 to 1.8, total phthalates: 0.15 to 1.1)
- The Tier 2 Belted Kingfisher LOAEL-EEQ for aluminum increased from 0.31 to 2.3
- No significant increases for the Red Fox or Townsend's Big-Eared Bat EEQs resulted from changing the AUF to 1

Industrial Sub-Area/Central Creek Watershed

Using an AUF set to 1, the following EEQs increased from less than 1 to greater than 1:

- The Tier 1 River Otter NOAEL-EEQs for barium and thallium increased from 0.53 and 0.39 to 1.5 and 1.1, respectively
- The Tier 2 River Otter LOAEL-EEQ for 2,3,7,8-TCDD TEQ increased from 0.28 to 1.1
- The Tier 2 Belted Kingfisher NOAEL-EEQs for 2,3,7,8-TCDD TEQ and aluminum increased from 0.31 and 0.9 to 2.2 and 6.3, respectively
- The Tier 2 Belted Kingfisher LOAEL-EEQs for aluminum increased from 0.3 to 2.1
- No significant increases for the Red Fox or Townsend's Big-Eared Bat EEQs resulted from changing the AUF to 1

Low Impact Sub-Area/Goose Prairie Creek Watershed

Using an AUF set to 1, the following EEQs increased from less than 1 to greater than 1:

- The Tier 1 River Otter NOAEL-EEQs for barium increased from 0.62 to 1.8
- The Tier 2 River Otter NOAEL-EEQs for thallium increased from 0.35 to 1.4

- Tier 2 Belted Kingfisher NOAEL-EEQs for 2,3,7,8-TCDD TEQ, aluminum, BEHP, zinc, and total phthalates increased from 0.19 to 1.4, 0.93 to 7, 0.15 to 1.1, 0.24 to 1.8, and 0.15 to 1.1, respectively

- The Tier 2 Belted Kingfisher LOAEL-EEQ for aluminum increased from 0.31 to 2.3

- No significant increases for the Townsend's Big-Eared Bat EEQs resulted from changing the AUF to 1

<u>Low Impact Sub-Area/Harrison Bayou Watershed</u>

Using an AUF set to 1, the following EEQs increased from less than 1 to greater than 1:

- The Tier 1 River Otter LOAEL-EEQ for vanadium increased from 0.93 to 1.4

- The Tier 2 River Otter NOAEL-EEQ for thallium increased from 0.49 to 1.0

- The Tier 2 Belted Kingfisher NOAEL-EEQ for 2,3,7,8-TCDD TEQ increased from 0.42 to 1.6

- The Tier 2 Belted Kingfisher LOAEL-EEQ for aluminum increased from 0.5 to 2

- No significant increases for the Townsend's Big-Eared Bat EEQs resulted from changing the AUF to 1

<u>Low Impact Sub-Area/Central Creek Watershed</u>

Using an AUF set to 1, the following EEQs increased from less than 1 to greater than 1:

- The Tier 1 River Otter NOAEL-EEQs for barium and thallium increased from 0.53 and 0.39 to 1.5 and 1.1, respectively

- The Tier 2 River Otter NOAEL-EEQ for vanadium increased from 0.47 to 1.8

- The Tier 2 River Otter LOAEL-EEQ for 2,3,7,8-TCDD increased from 0.28 to 1.1

- The Tier 2 Belted Kingfisher NOAEL-EEQs for 2,3,7,8-TCDD TEQ and aluminum increased from 0.31 and 0.9 to 2.2 and 6.3, respectively

- The Tier 2 Belted Kingfisher LOAEL-EEQ for aluminum increased from 0.3 to 2.11

- No significant increases for the Townsend's Big-Eared Bat EEQs resulted from changing the AUF to 1

<u>Low Impact Sub-Area/Saunders Branch Watershed</u>

Using an AUF set to 1, the following EEQs increased from less than 1 to greater than 1:

- The Tier 1 River Otter NOAEL-EEQs for barium increased from 0.53 to 2.6

- The Tier 2 Belted Kingfisher NOAEL EEQ for aluminum increased from 0.75 to 9.2
- The Tier 2 Belted Kingfisher LOAEL-EEQ for aluminum increased from 0.25 to 3.1
- No significant increases for the Townsend's Big-Eared Bat EEQs resulted from changing the AUF to 1

<u>Waste Sub-Area/Central Creek Watershed</u>

Using an AUF set to 1, the following EEQs increased from less than 1 to greater than 1:

- The Tier 2 Red Fox NOAEL-EEQs for 1,3-DNB and aluminum increased from 0.28 and 0.97 to 1.5 and 5.1, respectively
- The Tier 2 Red Fox LOAEL-EEQ for 2,4-DNT increased from 0.27 to 1.4
- The Tier 1 River Otter NOAEL-EEQs for barium and thallium increased from 0.54 and 0.39 to 1.5 and 1.1, respectively
- The Tier 2 River Otter NOAEL-EEQs for 2,4,6-TNT, vanadium, and total nitrotoluenes increased from 0.68, 0.47, and 0.68 to 2.6, 1.8, and 2.6, respectively
- The Tier 2 River Otter LOAEL-EEQs for 2,3,7,8-TCDD TEQ, 2,4,6-TNT, and total nitrotoluenes increased from 0.28 and 0.46, and 0.46 to 1.1, 1.7, and 1.7, respectively
- The Tier 1 Townsend's Big-Eared Bat NOAEL-EEQs for 1,3,5-TNB, 1,3-DNB, 2,4-DNT, and aluminum increased from 0.79, 0.88, 0.47, and 0.48 to 2.1, 2.4, 1.3, and 1.3
- The Tier 2 Townsend's Big-Eared Bat NOAEL-EEQs for 1,3-DNB and barium increased from 0.15 and 0.15 to 1.2 and 1.2, respectively
- The Tier 2 Belted Kingfisher NOAEL-EEQs for 2,3,7,8-TCDD TEQ and aluminum increased from 0.31 and 0.9 to 2.2 and 6.3, respectively
- The Tier 2 Belted Kingfisher LOAEL-EEQs for aluminum increased from 0.15 to 1.2
- The Tier 1 Red-Tailed Hawk NOAEL-EEQ for 2,3,7,8-TCDD increased from 0.6 to 1.2
- The Tier 2 Red-Tailed Hawk LOAEL-EEQs for 2,4-DNT and total nitrotoluenes increased from 0.8 and 0.8 to 2.8 and 2.8, respectively
- No significant increases for the Raccoon EEQs resulted from changing the AUF to 1

<u>Waste Sub-Area/Harrison Bayou Watershed</u>

Using an AUF set to 1, the following EEQs increased from less than 1 to greater than 1:

- The Tier 2 Red Fox NOAEL-EEQ for 1,3-DNB increased from 0.28 to 1.5
- The Tier 2 Red Fox LOAEL-EEQs for 2,4-DNT increased from 0.27 to 1.4

- The Tier 1 River Otter LOAEL-EEQs for vanadium increased from 0.27 to 1.4
- The Tier 2 River Otter NOAEL-EEQ for thallium increased from 0.48 to 1.01
- The Tier 2 River Otter LOAEL-EEQs for 2,4,6-TNT and total nitrotoluenes increased from 0.83 to 1.7
- The Tier 1 Townsend's Big-Eared Bat NOAEL-EEQs for 1,3,5-TNB, 1,3-DNB, 2,4-DNT, and aluminum increased from 0.79, 0.88, 0.47, and 0.92 to 2.12, 2.37, 1.28, and 2.47, respectively
- The Tier 2 Townsend's Big-Eared Bat NOAEL-EEQs for 2,3,7,8-TCDD TEQ, aluminum, and barium increased from 0.15, 0.16, and 0.15 to 1.2, 1.3, and 1.2, respectively
- The Tier 2 Belted Kingfisher NOAEL-EEQ for 2,3,7,8-TCDD TEQ increased from 0.42 to 1.6
- The Tier 2 Belted Kingfisher LOAEL-EEQ for aluminum increased from 0.51 to 2
- The Tier 2 Red-Tailed Hawk LOAEL-TRVs for 2,4,6-TNT and total nitrotoluenes increased from 0.78 to 2.8
- No significant increases for the Raccoon EEQs resulted from changing the AUF to 1

As shown in this uncertainty analysis, the implications of wide-ranging receptors visiting more than one sub-area and/or watershed would result in estimated EEQs being larger than initially predicted. The actual numerical increase in the EEQ is expected to be less than that predicted in this section, as COPEC doses would be integrated over the area of exposure. Focusing on situations where the Tier 2 LOAEL value increases from less than 1 to greater than 1 may provide an indication of chemicals that are likely to be a threat to ecological receptors if the receptors' movement were restricted to a given watershed or sub-area. Tier 2 LOAELs increased from below 1 to above 1 for the following receptors:

- Belted Kingfisher
  - Aluminum, all watersheds
- River Otter
  - 2,3,7,8-TCDD TEQ, Industrial and Low-Impact Sub-Areas/Central Creek
  - 2,3,7,8-TCDD TEQ, 2,4,6-TNT, and Total Nitrotoluenes, Waste Sub-Area/Central Creek
  - 2,4,6-TNT and Total Nitrotoluenes, Waste Sub-Area/Harrison Bayou
- Red Fox
  - 2,4-DNT, Waste Sub-Area/Central Creek and Harrison Bayou watersheds

- Red-Tailed Hawk
  - 2,4-DNT, and Total Nitrotoluenes, Waste Sub-Area/Central Creek
  - 2,4,6-TNT and Total Nitrotoluenes, Waste Sub-Area/Harrison Bayou

If large-range receptors' movement was limited such that they were not able to roam freely within the extent of their home range (e.g., if physical barriers were constructed, or habitat was removed for industrial development), some additional concern may be warranted for the receptors and COPECs listed above. However, because the future use of the installation is as a wildlife refuge, receptors are likely to be able to wander throughout the installation without disruption or limitations to their movement patterns. Furthermore, if future industrial development does take place, it is likely to occur in areas that were previously used for historical processes (e.g., the Plant Two Area), which, by their past use, are also more contaminated. Therefore, although the home range area of some organisms might be reduced under an industrial development scenario, it is also likely that ecological receptors would preferentially use areas of less disturbed habitat. This less disturbed habitat is expected to be less impacted by previous site use and have lower exposure concentrations of COPECs. In summary, concern regarding the uncertainty of using an AUF for large-range receptors at LHAAP is minimal.

8.13 Uncertainties Associated with Selection of Dioxin Toxic Equivalency Factors

Toxic equivalency factors were used to estimate the 2,3,7,8-TCDD TEQ concentration (**Section 6.1.3.3**; **Table 6-13**). It is important to note that the TEFs used to estimate each congener's TEQ concentration were very conservatively selected. Three TEFs were available for each congener, a mammal TEF, an avian TEF, and a fish TEF, and the greatest TEF was selected for use in Step 3, given its screening level approach. Four TEFs that were used for mammal receptors like the Short-Tailed Shrew and the Deer Mouse were based on either avian or fish receptors, and overestimated the TEQ by up to 10-fold, as shown in the following table:

Comparison of 2,3,7,8-TCDD TEFs Used to Estimate Wildlife EEQs

TCDD Congener	Mammal TEF	Non-Mammal TEF Used in Step 3 ERA	Overestimation of Mammal TCDD TEQ
1,2,3,4,7,8-HxCDD	0.1	0.5	5
2,3,7,8-TCDF	0.1	1.0	10
1,2,3,7,8-PeCDF	0.05	0.1	2
2,3,4,7,8-PeCDF	0.5	1	2
TCDD Congener	**Avian TEF**	**Non-Avian TEF Used in Step 3 ERA**	**Overestimation of Avian TCDD TEQ**
1,2,3,4,7,8-HxCDD	0.05	0.5	10
1,2,3,6,7,8-HxCDD	0.01	0.1	10
1,2,3,4,6,7,8-HpCDD	0.001	0.01	10

Similarly, three TEFs that were used for avian receptors like the American Woodcock were based on either mammal or fish receptors, and overestimated the TEQ concentration by ten-fold, as shown in the above table.

Depending on the dioxin/furan congeners that contributed the most to the 2,3,7,8-TCDD TEQ concentration within a particular sample, and whether the measurement receptor was a bird or a mammal, dioxin hazards could have been overestimated by as much as ten-fold using this conservative approach.

8.14 Summary of Surface Water and Sediment Samples Collected in 2004

Twenty additional sediment and eleven additional surface water samples were collected in September 2004 to address regulator concerns regarding possible data gaps in the four watersheds at LHAAP. The analytical results from these samples were not obtained in time for incorporation into the data set used for the Step 3 Report (Shaw, 2004f). These data are presented, and semi-qualitatively evaluated, in **Appendix G**. The MDCs, means, and 95 percent UCLs for the new samples were compared with the correlating parameters in the Step 3 database to identify whether the EPCs used in Step 3 were underestimated, which could potentially alter Step 3 conclusions. Concentrations were also compared with ecological benchmark values to determine the potential for adverse ecological effects. Additional factors such as toxicity concerns, spatial distribution of detected concentrations, etc. were also taken into account.

Several chemicals had higher MDCs, 95 percent UCLs, and/or mean concentrations in the recently collected data set than in the data base used for the Step 3 evaluation. However, it was determined that the impact of the new data, when combined with the main Step 3 data, is relatively minor for all chemicals, and it is unlikely that risks to ecological receptors were underestimated using the existing data set. Additional details for individual chemicals are provided in **Appendix G**.

8.15 Uncertainties Associated with Modeling Fish Tissue Concentrations

There is considerable uncertainty associated with modeling COPEC concentrations in fish tissue from surface water or sediment, and the conservative modeling approaches used in Step 3 likely resulted in an overestimation of COPEC concentrations in fish.

Total COPEC concentrations in surface water were collected and used in the Step 3 assessment, rather than the more appropriate dissolved concentrations. As dissolved concentrations represent the bioavailable fraction, and dissolved concentrations are almost always lower than total concentrations, this suggests bioaccumulation was overestimated. Although corrections were made to the surface water-to-fish BCFs to estimate the dissolved fraction based on generic assumptions (**Table 7-24**), it is likely these corrections still resulted in an overestimation of the dissolved fraction. COPEC-specific BCF values themselves were observed to vary widely, with orders of magnitude differences seen between Tier 1 and Tier 2 BCF values for some COPECs.

In addition, the TrophicTrace® model used to estimate COPEC concentrations in fish tissue from sediment (**Appendix B**) has a variety of uncertainties that are expected to result in an overestimation of fish tissue concentrations. As discussed in **Appendix B**, trophic transfer factors (TTF) were used for cadmium, chromium, copper, lead, mercury, nickel, silver, and zinc to model COPEC transfer from sediment to benthic invertebrates to fish. Concentrations in benthic invertebrates were estimated using benthic sediment accumulation factors (BSAFs), and these BSAFs have their own associated uncertainties and are likely conservative. For the remaining inorganic COPECs (that did not have readily available TTFs), the TrophicTrace® BCF module was used to model COPEC transfer from sediment to pore water (using equilibrium partitioning coefficients) to fish tissue (using BCFs). There is considerable uncertainty associated with both the equilibrium partitioning approach itself and, as discussed previously, with surface-water-to-fish-tissue BCFs. For organic COPECs, the TrophicTrace® module that was used to model COPEC transfer from sediment to fish tissue employed food-chain modeling and uptake across the gills. Many conservative assumptions were used in execution of the food chain model, such as an assumed 100 percent AUF.

Other inputs required for the TrophicTrace® model included dissolved organic carbon and particulate organic carbon concentrations in surface water, and whole-body fish lipid content. The organic carbon concentrations were based on conservative default values, while the lipid content was based on readily-available literature values.

To validate the fish modeling results, available fish tissue data were reviewed from the USEPA Fish Study conducted at Clinton Lake (a background control site) and at Goose Prairie Creek and Harrison Bayou watersheds, LHAAP (USEPA Region 6, 2004). A review of the study design indicates that the USEPA Region 6 fish tissue study likely represents a “worst-case” scenario for LHAAP with respect to the accumulation of chemicals in fish tissue. Extensive portions of Goose Prairie Creek and Harrison Bayou flow through the Industrial Sub-Area and Waste Sub-Area, respectively (**Figure 1-4**), which are the areas of most intense historical use on the installation; therefore, any site-related contaminants transported to Caddo Lake are likely to overlap the area where the fish collection occurred. Also, the size and species of fish targeted (i.e., bass [minimum length of 14 inches], catfish [minimum length of 12 inches], crappie [minimum length of 10 inches], and sunfish [no length limit]) includes a mature cohort of secondary and tertiary consumers, and thus represent the types of fish that would be expected to carry the highest body burden of bioaccumulative chemicals. Therefore, because the fish sampling took place in areas that would be maximally influenced by on-site contamination, and included species and age (represented by size) cohorts most likely to exhibit chemical accumulation, it is assumed that results of the USEPA Region 6 fish tissue adequately and conservatively represent the fish accumulation paradigm across the installation as a whole. This includes on-site streams, which are likely to have smaller (i.e., younger) fish and more dispersed areas of elevated chemical concentrations, both of which would contribute to lower representative body burdens within the portion of the watershed that traverses LHAAP. The results from the USEPA Region 6 (2004) study are discussed in the following paragraphs.

Estimated brown bullhead COPEC tissue concentrations (from the TrophicTrace® sediment-to-fish-tissue model) and actual bullhead tissue concentrations from the USEPA field study (USEPA, Region 6, 2004) are presented in **Table 8-7**. The model overestimated concentrations for all COPECs for which meaningful ratios could be calculated, with the exception of aluminum. COPEC concentration overestimates were as high as 40-fold for nickel, 28-fold for copper, and 21-fold for lead using the Tier 1 upper-bound approach, and overestimates were as high as 7-fold for nickel, copper, and silver using the Tier 2 average approach. For aluminum, the modeled concentrations underestimated tissue concentrations, and ranged from 4% to 11% of the measured concentration. Chromium concentrations were entirely nondetect in all fish samples.

Estimated fathead minnow COPEC concentrations (using the surface water-to-fish-tissue BCF model) and measured sunfish tissue concentrations from the USEPA field study (USEPA Region 6, 2004) are presented in **Table 8-8**. Note: measured sunfish results are used because no minnow tissue samples were collected during the field sampling program. Sunfish species included redear, black crappie, warmouth, bluegill, and large mouth bass. The model overestimated concentrations for almost all COPECs for which meaningful ratios could be calculated. For aluminum, however, modeled concentrations were very close to estimated detection limits. COPEC concentration overestimates were as high as 324-fold for 2,3,7,8-TCDD TEQ, 218-fold for manganese, 34-fold for copper, 30-fold for barium, and 8-fold for BEHP using the Tier 1 upper-bound approach, and overestimates were as high as 50-fold for 2,3,7,8-TCDD TEQ, 9-fold for iron, and approximately 6-fold for zinc and copper using the Tier 2 average approach. Chromium concentrations were entirely nondetect in all fish samples.

Estimated brown bullhead HQs, based on modeled COPEC concentrations from sediment and NOAEL- and LOAEL-based CBRs are presented in **Table 8-9**. Using the Tier 1 upper-bound approach, fish HQs ranged up to 40, with silver, nickel, cadmium, and vanadium having estimated NOAEL-based HQs above 10, and cadmium, silver, and zinc having LOAEL-based HQs above 5. Using the Tier 2 average approach, HQs ranged up to 31, with only silver having a NOAEL-based HQ above 10 and a LOAEL-based HQ above 5.

Estimated fathead minnow HQs, based on modeled COPEC concentrations from surface water and NOAEL- and LOAEL-based CBRs are presented in **Table 8-10**. Using the Tier 1 upper-bound approach, fish HQs ranged up to 11, with only BEHP having a NOAEL-based HQ above

10, and no COPECs with LOAEL-based HQs above 5. Using the Tier 2 average approach, HQs ranged up to 3.1 for BEHP, with zinc being the only other COPEC with an HQ above 1.

Estimated brown bullhead and sunfish HQs, based on measured COPEC concentrations and NOAEL- and LOAEL-based CBRs are presented in **Tables 8-11** and **8-12**, respectively. For the brown bullhead HQs ranged from 2.5 to 12.5 for aluminum and 1 or less for zinc, and for sunfish, HQs were less than 1 for BEHP and zinc.

As site-specific background concentrations of aluminum in brown bullhead averaged 27 mg/kg and ranged up to 38 mg/kg, and measured concentrations in Goose Prairie Creek Cove bullheads averaged 49 mg/kg, and were as high as 160 mg/kg (USEPA Region 6, 2004), these elevated aluminum levels do not appear to be associated with background.

Modeling COPEC concentrations in fish from either sediment or surface water generally resulted in an overestimate of actual tissue concentrations. Even though site-specific TOC concentrations in sediment were used in the models for the sediment-to-tissue pathway, and TOC is known to partially control bioavailability, bioaccumulation was still overestimated. It appears that bioavailability was overestimated by the TrophicTrace® model, or other site-specific factors not considered by the model limited actual bioavailability and/or uptake. It is unknown why the uptake of one COPEC (aluminum) appears to have been underestimated by the TrophicTrace® model, however, three possible explanations include:

1. Sediment to pore water partitioning was underestimated (aluminum K_d = 3.17 was used),
2. The pore water to fish tissue bioaccumulation was underestimated (aluminum BCF = 0.86 was used), and/or,
3. There may be other sources of aluminum in Caddo Lake, not related to LHAAP, which contributed to the elevated aluminum levels in fish collected from Goose Prairie Creek Cove.

Although brown bullhead aluminum HQs were estimated to range from 2.5 to 12.5 based on measured concentrations, and NOAEL- and LOAEL-based CBRs of 12.8 mg/kg and 20 mg/kg, respectively, these HQs are suspect for several reasons, as discussed below.

- It is possible that chloride was partially responsible for the aluminum LOAEL-based CBR of 20 mg/kg, as the form of aluminum used in Peterson et al. (1989) was aluminum chloride. In addition, as Peterson et al. (1989) used low pH conditions during their tests, mortality was likely enhanced compared with the neutral pH conditions expected in LHAAP waters. Finally, the aluminum LOAEL-CBR of 20 mg/kg was based on a reported dry weight aluminum concentration in dead fish tissue of 100 mg/kg (**Appendix C**) used an assumed dry weight to wet weight conversion factor of 80 percent water content in the calculation of all LHAAP fish HQs (100 x [1-0.80]). As the test fish in Peterson et al. (1989) were Atlantic salmon alevins, the accuracy of this conversion factor is especially uncertain for this life stage.

- The aluminum NOAEL-CBR of 12.8 mg/kg (Cleveland et al., 1991) was based on an estimated wet weight aluminum concentration in fish tissue, however, this concentration was the greatest aluminum concentration measured in the brook trout test fish and no adverse effects were noted in any of the fish tested. This suggests that LHAAP HQs calculated with this NOAEL-based CBR may be considerably inflated.
- No abnormalities were noted in the fish collected from Goose Prairie Creek Cove with aluminum concentrations as high as 160 mg/kg wet weight.

Based on the data presented in this subsection, the following conclusions may be drawn:

- Modeled COPEC concentrations in fish, from either sediment or surface water, resulted in an overestimate of actual measured tissue concentrations, except for aluminum.
- Estimated bullhead fish HQs based on modeled tissue concentrations from sediment were above 1 for eight metals using the upper-bound Tier 1 approach, and for five metals using the average Tier 2 approach.
- If actual measured bullhead tissue concentrations were used, fish HQs would only be above 1 for aluminum (NOAEL- and LOAEL-based HQs ranged from 2.5 to 12.5).
- Estimated fathead minnow fish HQs based on modeled tissue concentrations from surface water were above 1 for three metals and two organics using the upper-bound Tier 1 approach, and for one metal and one organic using the average Tier 2 approach.
- If actual measured sunfish tissue concentrations were used (as a surrogate for fathead minnows), fish HQs would not be above 1 for any COPECs.
- The estimation of fish hazards by (1) modeling tissue concentrations from sediment and surface water, and (2) comparing these modeled concentrations to CBRs associated with adverse effects to fish appears to result in considerable overestimations of fish hazard, except for aluminum, as discussed previously.

8.16 Amphibian Exposure to Wet Weather COPEC Concentrations

Surface water samples associated with wet weather events were not used in the aquatic risk assessment (**Section 6.1.3.2**). Therefore, there is some uncertainty associated with potential exposure and impacts to sensitive amphibians that live and reproduce in temporary vernal pools that may be contaminated from surface water runoff. To assess this potential exposure pathway, wet weather surface water data were compared with surface water sample results used in the aquatic risk assessment and with ESVs. These comparisons are shown in **Tables 8-13** through **8-16** for the four watersheds.

For the Harrison Bayou watershed, 33 chemicals were detected out of 187 chemicals analyzed in the wet weather samples, and of these, eight (aluminum, chloride, chromium, iron, lead, manganese, mercury, and nickel) had maximum concentrations that exceeded both concentrations used in the aquatic risk assessment and ESVs (**Table 8-13**).

For the Goose Prairie Creek watershed, 22 chemicals were detected out of 187 chemicals analyzed in the wet weather samples, and of these, eight (aluminum, beryllium, chromium, copper, iron, lead, manganese, and nitrate) had maximum concentrations that exceeded both concentrations used in the aquatic risk assessment and ESVs (**Table 8-14**).

For the Central Creek watershed, 15 chemicals were detected out of 187 chemicals analyzed in the wet weather samples, and of these, only nitrate/nitrite had a maximum concentration that exceeded both the concentration used in the aquatic risk assessment and the ESV (**Table 8-15**).

For the Saunders Branch watershed, 10 chemicals were detected out of 144 chemicals analyzed in the wet weather samples, and of these, three (chromium, lead, and nitrate) had maximum concentrations that exceeded both concentrations used in the aquatic risk assessment and ESVs (**Table 8-16**).

To evaluate the potential significance of these 13 wet weather COPECs for amphibians, effect level concentrations were obtained from USEPA's ECOTOX on-line data base (USEPA, 2002, 2006). Effect endpoints of concern selected for the search included growth, reproduction, population, and survival. Target genera in the search included salamanders (*Ambystoma*), toads (*Xenopus* and *Bufo*), and frogs (*Rana* and *Hyla*). These five genera are expected to be representative of the typical amphibian test species utilized in standard laboratory toxicity tests, and these genera include 60 percent of the amphibian species listed as being present or potentially present at LHAAP (**Table 4-4**). **Table 8-17** presents a summary of the amphibian surface water concentrations of potential concern from the ECOTOX database search. The geometric average concentration of the available effect levels for each COPEC was determined following the approach used by USEPA (2005) for developing NOAEL- and LOAEL TRVs. As noted in **Table 8-17**, the concentrations of concern for chloride, chromium, iron, nitrate, and sulfate may be biased low due to some of the compounds or elements considered in the individual studies. For example, the unusually low concentrations of concern for nitrate and chloride (0.19 and 0.54 mg/L, respectively) may be due to the test compounds cadmium nitrate and cadmium chloride, rather than nitrate and chloride themselves.

For the Harrison Bayou Watershed, four wet weather COPECs (aluminum, chloride, iron, and nickel) had maximum concentrations that exceeded concentrations of potential concern for adverse amphibian effects (**Table 8-18**). The use of MDCs, however, is overly conservative because total, not dissolved concentrations were collected in the field, and samples collected during wet weather events are expected to be quite turbid. Dissolved concentrations of metals are actually the bioavailable fraction, and dissolved concentrations of wet weather COPECs are expected to be significantly lower than total concentrations. If mean wet weather concentrations are used in the comparison (to compensate for the overly conservative approach of having to use total concentrations), only two wet weather COPECs (aluminum and chloride) are a potential concern for amphibians. It is important to note that the site-specific background concentration of aluminum (7.91 mg/L; **Appendix F,** Table F-4) is greater than the ECOTOX effect concentration of 0.64 mg/L. This suggests that some conditions of the aluminum toxicity tests, such as low pH, may have artificially enhanced toxicity, which would overestimate toxicity if this 0.64 mg/L concentration were used to assess potential toxicity in the field. For chloride, it is expected that the effect concentration is biased low, as mentioned previously, due to toxic metals complexed with this ion that were used in the toxicity tests.

For the Goose Prairie Creek Watershed, four wet weather COPECs (aluminum, iron, manganese, and nitrate) had maximum concentrations that exceeded concentrations of potential concern for adverse amphibian effects (**Table 8-19**). However, if mean wet weather concentrations are used in the comparison (to compensate for the overly conservative approach of having to use total concentrations), only two wet weather COPECs (aluminum and nitrate) are a potential concern for amphibians. The potential over-conservativeness of the aluminum amphibian effects value was discussed for Harrison Bayou. For nitrate, it is expected that the effect concentration is biased low, as mentioned previously, due to toxic metals complexed with this ion that were used in the toxicity tests.

For the Central Creek Watershed, one wet weather COPEC (nitrate) had a maximum concentration that exceeded a concentration of potential concern for adverse amphibian effects (**Table 8-20**). For nitrate, however, it is expected that the effect concentration is biased low, as mentioned previously. In addition, if the mean wet weather concentration is used in the comparison (to compensate for the overly conservative approach of having to use a total concentration), no wet weather COPECs are a potential concern for amphibians. It is also important to note that the site-specific background concentration of nitrate (0.36 mg/L; **Appendix F**, Table F-4) is greater than the ECOTOX effect concentration of 0.19 mg/L and the MDC in wet weather samples of 0.21 mg/L.

For the Saunders Branch Watershed, one wet weather COPEC (nitrate) had a maximum concentration that exceeded a concentration of potential concern for adverse amphibian effects (**Table 8-21**). For nitrate, however, it is expected that the effect concentration is biased low, as mentioned previously. In addition, if the mean wet weather concentration is used in the comparison (to compensate for the overly conservative approach of having to use a total concentration), no wet weather COPECs are a potential concern for amphibians. It is also important to note that the site-specific background concentration of nitrate (0.36 mg/L; **Appendix F**, Table F-4) is greater than the ECOTOX effect concentration of 0.19 mg/L and the MDC in wet weather samples of 0.3 mg/L.

In conclusion, the exclusion of wet weather data from the aquatic risk assessment is not expected to significantly affect report conclusions. Although there is some uncertainty regarding potential risks to amphibians that may be exposed to the bioavailable fraction of wet weather COPECs in vernal pools at LHAAP, this exercise generally suggests that populations of amphibians are not expected to be significantly impacted.

8.17 Cumulative Hazard Calculations Across Media

During final COPEC selection (**Section 10.0**), if the overall EEQ for a chemical was greater than 1, but the medium specific contribution was less than 1, the chemical was not selected as a final COPEC in the medium that had an EEQ below unity. For example, if the EEQ for barium was 5 for the raccoon, but the EEQ associated with soil exposure pathways was 4.5 and the EEQ associated with sediment exposure pathways was 0.5, then barium would have been selected as a final COPEC in soil, but not sediment (assuming other lines of evidence also concluded that barium was a site-related COPEC). Theoretically, this approach could result in a chemical having a cumulative EEQ greater than 1, but an EEQ of less than 1 for all three exposure media (i.e., soil, surface water, and sediment) individually, which could result in the chemical being eliminated as a final COPEC even though the total exposure for all media exceeded an EEQ of 1.

It is expected that any remedial action addressing chemicals who's EEQs are greater than 1 for a given medium will adequately reduce total exposure to an acceptable level, even if minor sources are left in place in other media. However, EEQs for a chemical can potentially exceed 1 when all medium-specific EEQs are less than 1, in which case a potential risk driver could be overlooked (for example, if a chemical's EEQ was 0.9, 0.9, and 0.9 for soil, surface water, and sediment, respectively, resulting in a total EEQ close to 3). To evaluate this potential uncertainty, an exercise was conducted on the Raccoon, Bank Swallow, and Belted Kingfisher, which are the three measurement receptors whose total exposure was most significantly distributed among multiple media. COPECs that had a total EEQ greater than 1, but at least one medium-specific EEQ that was less than 1, were listed in a table for each sub-area/watershed combination for the three receptors described above. The purpose of this exercise was to determine if any chemical was inappropriately ignored as a COPEC because all medium-specific EEQs were less than 1. The results of this exercise are presented in **Table 8-22**. In four instances, COPECs had EEQs less than 1 for all media, but cumulative EEQs greater than 1:

Raccoon exposure to vanadium in the Low Impact Sub-Area/Harrison Bayou watershed, Bank Swallow exposure to dioxin in the Waste Sub-Area/Central Creek watershed, Raccoon exposure to vanadium in the Waste Sub-Area/Harrison Bayou watershed, and Bank Swallow exposure to dioxin in the Waste Sub-Area/Harrison Bayou watershed. In general, concern for these chemicals is reduced due to several factors:

- The minimum home ranges of the receptors of concern are relatively large (Raccoon = 13 acres, Bank Swallow = 49 acres, Belted Kingfisher = 118 acres), and areas of elevated concentrations of each of these chemicals in each media are limited, as reflected by their low EEQs. Therefore, it would not be expected that any receptor would regularly encounter elevated concentrations of a particular COPEC in multiple media, particularly as surface water and sediment sample locations are generally distant from soil sample locations. In the rare case where multi-medium exposure may occur, because most species are territorial, it is anticipated that only a few individuals would be affected, rather than populations.
- The maximum cumulative hazard of approximately 2.7 (0.9 + 0.9 + 0.9) that could result from a chemical overlooked as a final COPEC due to even distribution of EEQs less than 1 among multiple media is relatively low, and is likely to be insignificant given the conservative nature of the risk assessment.
- Total EEQs for all chemicals will be recalculated at the end of the BERA after site-specific data have been obtained. PRGs protective of ecological health will be developed in appropriate media for any final COPECs (**Section 10.0**) that exceed an EEQ of 1 based on these revised EEQs. A new BERA uncertainty section will revisit this issue to assess potential significance.

An additional specific factor that reduces concern for the occurrences listed above includes the following:

- Bank Swallow exposure to dioxin in the Waste Sub-Area/Central Creek watershed and the Waste Sub-Area/Harrison Bayou watershed: Ecological hazard was divided evenly between soil and sediment (see Table 8-22). For soil, the Short-Tailed Shrew experienced greater exposure to dioxin in the Waste Sub-Area than the Bank Swallow. Any remedial alternatives developed for the shrew would presumably be protective of the swallow, as well, and would likely reduce the cumulative EEQ from soil and sediment for the bank swallow to close to or below 1.

8.18 Summary of Uncertainty for Step 3

A summary of the sources of uncertainty in the Step 3 evaluation, and an estimation of the magnitude of their effect, is presented in **Table 8-23**.

Table 8-1
Comparison of Ecological Screening Values to Detection Limits in Total Soil

Table 8-2
Comparison of Ecological Screening Values to Detection Limits in Surface Water

Table 8-3
Comparison of Ecological Screening Values to Detection Limits in Sediment

Table 8-4
Comparison of Infrequently Detected Non-Bioaccumulative Chemicals to Ecological Screening Values, Total Soil

Table 8-5
Comparison of Infrequently Detected Non-Bioaccumulative Chemicals to Ecological Screening Values, Sediment

Table 8-6
Evaluation of Soil COPEC EPCs for Potential Bias Using 95 Percent UCL Concentration for Entire Sub-Areas, Compared with Smaller Area Associated with Receptor Home Range Footprint

Table 8-7
Comparison of Modeled Brown Bullhead Tissue Concentrations From Sediment with Measured Values, Goose Prairie Creek Watershed

Table 8-8
Comparison of Modeled Fathead Minnow Tissue Concentrations From Surface Water with Measured Sunfish Values, Goose Prairie Creek Watershed

Table 8-9
Brown Bullhead Hazards Based on Modeled Tissue Concentrations from Sediment

Table 8-10
Fathead Minnow Hazards Based on Modeled Tissue Concentrations from Surface Water

Table 8-11
Brown Bullhead Hazards Based on Measured Tissue Concentrations

Table 8-12
Sunfish Hazards Based on Measured Tissue Concentrations

Table 8-13
Comparison of Wet Weather Surface Water Samples to Samples Used in Aquatic Ecological Risk Assessment, Harrison Bayou

Table 8-14
Comparison of Wet Weather Surface Water Samples to Samples Used in Aquatic Ecological Risk Assessment, Goose Prairie Creek

Table 8-15
Comparison of Wet Weather Surface Water Samples to Samples Used in Aquatic Ecological Risk Assessment, Central Creek

Table 8-16
Comparison of Wet Weather Surface Water Samples to Samples Used in Aquatic Ecological Risk Assessment, Saunders Branch

Table 8-17
Concentrations of Concern for Potential Adverse Amphibian Effects From Exposure to Surface Water Runoff

Table 8-18
Wet Weather Surface Water COPECs and Potential Effects on Amphibians, Harrison Bayou

Table 8-19
Wet Weather Surface Water COPECs and Potential Effects on Amphibians, Goose Prairie Creek

Table 8-20
Wet Weather Surface Water COPECs and Potential Effects on Amphibians, Central Creek

Table 8-21
Wet Weather Surface Water COPECs and Potential Effects on Amphibians, Saunders Branch

Table 8-22
Analysis of Cumulative Effects Across Media

Table 8-23
Summary Uncertainties for the LHAAP Step 3 Ecological Risk Evaluation

Table 8-1
Comparison of Ecological Screening Values to Detection Limits in Total Soil

Chemical [a]	ESV mg/kg	Industrial Sub-Area Detection Limits Minimum - Maximum	Low Impact Sub-Area Detection Limits Minimum - Maximum	Waste Sub-Area Detection Limits Minimum - Maximum
Inorganics				
Aluminum	50	1.01 - 22200	1.01 - 10.9	10.1 - 31
Antimony	5	0.12 - 60	0.26 - 1.2	1.08 - 9.41
Arsenic	37	0.1 - 5	0.1 - 1	0.505 - 9.09
Barium	330	0.201 - 1430	0.2 - 1.4	1.01 - 31
Beryllium	10	0.0204 - 1.17	0.0207 - 0.219	0.202 - 0.784
Boron	0.5	ND	1.01 - 2.19	ND
Cadmium	32	0.1 - 10	0.101 - 1	0.252 - 1.565
Calcium	Nutrient	6.1 - 11900	NA - NA	530 - 780
Chloride	Nutrient	2.1 - 1007.25	10 - 10	0.5 - 50.2
Chromium	0.4	0.506 - 26.4	0.503 - 1.4	1.01 - 2.85
Cobalt	13	0.52 - 12	5.17 - 6	1 - 7.8
Copper	61	0.5 - 10	0.497 - 0.547	0.505 - 3.92
Cyanide, Total	5	0.44 - 1.175	ND	ND
Iron	200	1.9 - 35000	5.03 - 10.9	10.1 - 16
Lead	50	0.2 - 68	0.5 - 3.04	0.318 - 115.47
Magnesium	Nutrient	5.06 - 1290	5.03 - 10.9	10.1 - 780
Manganese	500	0.59 - 23	0.993 - 1.09	1.01 - 2.35
Mercury	0.1	0.01 - 7.08	0.01 - 0.14	0.0105 - 0.23
Molybdenum	2	0.506 - 7.1	0.503 - 1.09	ND
Nickel	30	0.506 - 9.4	0.503 - 6	1.01 - 6.3
Potassium	Nutrient	5.43 - 1200	-	530 - 780
Selenium	1	0.1 - 14	0.1 - 2.3	0.42 - 1.57
Silver	2	0.016 - 10	0.179 - 1.4	0.182 - 2.85
Sodium	Nutrient	52 - 1200	ND	124 - 780
Strontium	NSV	0.5 - 890	0.497 - 0.547	0.505 - 7.8
Thallium	1	0.13 - 51.9	ND	0.531 - 5.91
Vanadium	2	0.5 - 12	0.497 - 0.547	0.505 - 7.8
Zinc	120	0.55 - 24	1.01 - 5.47	0.39 - 5.49
General Chemistry				
Nitrate	NSV	0.055 - 4.3	0.01 - 0.1	0.06 - 0.245
Sulfate	NSV	2.2 - 300	5 - 300	0.94 - 50.05
Perchlorate				
Perchlorate	NSV	0.00525 - 75.7	0.021 - 0.024	0.00517 - 4.78
Nitroaromatics				
1,3,5-Trinitrobenzene	0.376	0.00025 - 2.6	ND	0.15 - 110
1,3-Dinitrobenzene	0.655	0.00025 - 1.2	ND	0.05 - 110
2,4,6-Trinitrotoluene	30	0.00025 - 160	ND	0.1 - 110
2,4-Dinitrotoluene [b]	1.28	0.00025 - 3.3	ND	0.0294 - 110
2,6-Dinitrotoluene [b]	0.0328	ND	ND	0.0294 - 120
2-Amino-4,6-dinitrotoluene	80	0.05 - 1.3	ND	0.05 - 110
4-Amino-2,6-dinitrotoluene	80	0.05 - 1.3	ND	0.05 - 110
Nitrobenzene [b]	40	0.00026 - 3.3	ND	ND
HMX	NSV	ND	ND	0.1 - 1000
RDX	100	ND	ND	0.1 - 450
Dioxins/Furans				
2,3,7,8-TCDD TEQ	0.00000315	NA - NA	NA - NA	NA - NA
Polychlorinated Biphenyls (PCBs)				
Aroclor 1242	40	0.00129 - 0.39	0.00137 - 0.006	0.00147 - 0.21
Aroclor 1248	40	0.00129 - 0.39	0.00137 - 0.006	ND
Aroclor 1254	40	0.00129 - 0.39	0.00137 - 0.006	0.00147 - 0.21
Aroclor 1260	40	0.00129 - 0.39	0.00137 - 0.006	0.00147 - 0.21
Aroclor 1268	40	ND	0.00137 - 0.00238	ND

Table 8-1
Comparison of Ecological Screening Values to Detection Limits in Total Soil

Chemical [a]	ESV mg/kg	Industrial Sub-Area Detection Limits Minimum - Maximum	Low Impact Sub-Area Detection Limits Minimum - Maximum	Waste Sub-Area Detection Limits Minimum - Maximum
Organochlorine Pesticides				
1,2,3,4-Tetrachlorobenzene	2.02	0.000152 - 0.000405	0.00015 - 0.000477	ND
1,2,4,5-Tetrachlorobenzene [b]	2.02	0.000152 - 0.000405	0.00015 - 0.000477	0.000295 - 0.0355
2,4,5-TP	0.109	0.00087 - 0.2	ND	ND
4,4'-DDD	0.758	0.000152 - 0.195	0.00015 - 0.0074	0.000295 - 0.22
4,4'-DDE	0.596	0.000152 - 0.071	0.00015 - 0.0027	0.000295 - 0.081
4,4'-DDT	0.0035	0.000152 - 0.213	0.00015 - 0.008	0.000295 - 0.24
Aldrin	0.00332	0.000152 - 0.071	0.00015 - 0.0027	ND
alpha-BHC	0.0994	0.000152 - 0.053	0.00015 - 0.000477	ND
alpha-Chlordane	0.224	0.000152 - 0.0039	ND	0.000295 - 0.000355
Chlordane	0.224	0.000152 - 0.249	0.00015 - 0.0094	ND
cis-Nonachlor	0.224	0.000152 - 0.000405	0.00015 - 0.000477	ND
Dieldrin	0.00238	0.000152 - 0.036	0.00015 - 0.0013	ND
Endosulfan II	0.0358	0.000152 - 0.071	0.00015 - 0.0027	ND
Endosulfan Sulfate	0.119	0.0032 - 1.172	ND	ND
Endrin	0.0101	0.000152 - 0.107	0.00015 - 0.004	0.000295 - 0.12
gamma-BHC (Lindane)	0.005	0.000152 - 0.071	ND	ND
gamma-Chlordane	0.224	0.0032 - 0.0039	ND	ND
Heptachlor	0.00598	0.000152 - 0.053	ND	ND
Hexachlorobenzene [b]	0.199	0.000152 - 3.9	0.00015 - 0.000477	ND
Mirex	NSV	ND	0.00015 - 0.000477	0.000295 - 0.000355
o,p'-DDD	0.758	0.000152 - 0.000405	0.00015 - 0.000477	ND
o,p'-DDE	0.596	0.000152 - 0.000405	0.00015 - 0.000477	ND
o,p'-DDT	0.0035	0.000152 - 0.000405	0.00015 - 0.000477	ND
Oxychlordane	0.224	ND	0.00015 - 0.000477	ND
Pentachloroanisole	NSV	0.000152 - 0.000405	0.00015 - 0.000477	0.000295 - 0.000355
trans-Nonachlor	0.224	0.000152 - 0.000405	0.00015 - 0.000477	ND
Semivolatile Organics				
1,3-Dichlorobenzene [b]	0.655	0.0084 - 7.8	0.0274 - 3.6	ND
1-Naphthylamine	9.34	ND	0.0274 - 0.383	ND
2,6-Dinitrotoluene [b]	0.0328	0.00026 - 7.8	ND	ND
2-Methylnaphthalene	3.24	0.0261 - 7.8	0.0274 - 3.6	ND
2-Picoline	9.9	0.0261 - 0.352	0.0274 - 0.383	ND
4-Aminobiphenyl	NSV	ND	0.0274 - 0.383	ND
4-Chloro-3-methylphenol	NSV	ND	0.0274 - 3.6	ND
4-Nitrophenol	7	0.0261 - 20	ND	ND
Acenaphthene	20	0.0261 - 7.8	ND	ND
Acenaphthylene	682	0.0261 - 7.8	0.036 - 3.6	ND
Acetophenone	300	0.0261 - 0.352	ND	ND
Aniline	0.0568	0.0261 - 0.352	0.0274 - 0.383	ND
Anthracene	1480	0.0261 - 7.8	ND	ND
Benzo(a)anthracene	5.21	0.017 - 7.8	ND	0.0294 - 2.4
Benzo(a)pyrene	1.52	0.017 - 3.9	ND	0.0294 - 2.2
Benzo(b)fluoranthene	59.8	0.017 - 7.8	ND	0.0294 - 2.4
Benzo(ghi)perylene	119	0.017 - 7.8	ND	0.0294 - 2.4
Benzo(k)fluoranthene	148	0.017 - 7.8	ND	ND
Benzoic Acid	NSV	0.0261 - 20	0.0274 - 1.65	0.0294 - 10.667
bis(2-Ethylhexyl)phthalate	0.925	0.0261 - 7.8	0.0274 - 3.6	0.0294 - 2.4
Butyl benzyl phthalate	0.239	0.0261 - 7.8	0.0274 - 3.6	0.0294 - 2.4
Carbazole	NSV	0.0261 - 7.8	ND	ND
Chrysene	4.73	0.017 - 13.5	ND	0.0294 - 2.4
Dibenzo(a,h)anthracene	18.4	0.017 - 7.8	ND	ND
Dibenzofuran	NSV	0.0261 - 7.8	ND	ND

Table 8-1
Comparison of Ecological Screening Values to Detection Limits in Total Soil

Chemical [a]	ESV mg/kg	Industrial Sub-Area Detection Limits Minimum - Maximum	Low Impact Sub-Area Detection Limits Minimum - Maximum	Waste Sub-Area Detection Limits Minimum - Maximum
Semivolatile Organics *(continued)*				
Diethyl phthalate	100	0.0261 - 7.8	0.0274 - 3.6	ND
Dimethyl phthalate	200	0.0261 - 7.8	ND	ND
di-n-Butyl phthalate	200	0.0261 - 7.8	0.0274 - 3.6	0.0294 - 2.4
di-n-Octyl phthalate	709	0.0261 - 7.8	ND	ND
Ethyl methanesulfonate	NSV	0.0261 - 0.352	0.0274 - 0.383	ND
Fluoranthene	122	0.0261 - 7.8	ND	0.0294 - 2.4
Fluorene	30	0.0261 - 7.8	ND	ND
Hexachlorobenzene [b]	0.199	ND	ND	0.000295 - 2.2
Hexachloroethane	0.596	0.0261 - 7.8	ND	ND
Indeno(1,2,3-cd)pyrene	109	0.017 - 7.8	ND	0.0294 - 2.4
Naphthalene [b]	0.0994	0.0084 - 7.8	0.0274 - 3.6	ND
Pentachlorophenol	3	ND	0.0274 - 9.2	ND
Phenanthrene	45.7	0.0261 - 7.8	ND	ND
Phenol	30	0.0261 - 7.8	0.0274 - 3.6	ND
Pyrene	78.5	0.0261 - 7.8	ND	0.0294 - 2.4
Volatile Organics				ND
1,1,1-Trichloroethane	29.8	0.0014 - 0.025	ND	0.005 - 0.011
1,2-Dichloroethane	21.2	ND	ND	0.005 - 0.011
1,1-Dichloroethene	8.28	0.0011 - 0.025	ND	ND
2-Butanone	89.6	0.005 - 0.25	ND	0.011 - 0.05
2-Hexanone	12.6	0.005 - 0.25	ND	0.011 - 0.05
Acetone	2.5	0.003 - 0.5	0.011 - 0.1	0.011 - 0.1
Benzene	0.255	0.0013 - 0.025	ND	ND
Carbon disulfide	0.0941	0.005 - 0.025	ND	ND
Chlorobenzene	40	0.001 - 0.025	ND	ND
Chloroform	1.19	0.0014 - 0.025	ND	ND
Ethylbenzene	5.16	0.001 - 0.025	ND	ND
Methylene chloride	10.4	0.002 - 0.073	0.005 - 0.014	0.005 - 0.023
p-Isopropyltoluene	NSV	0.005 - 0.0162	ND	0.005 - 0.0078
Styrene	300	0.001 - 0.025	ND	0.005 - 0.011
Tetrachloroethene	9.92	0.001 - 0.025	ND	ND
Toluene	200	0.0031 - 0.025	ND	0.005 - 0.01134
trans-1,3-Dichloropropene	0.398	0.0015 - 0.025	ND	ND
Trichloroethene	12.4	0.0019 - 0.0325	ND	0.005 - 0.016
Trichlorofluoromethane	16.4	ND	ND	0.0054 - 0.016
Vinyl chloride	0.646	0.0021 - 0.068	ND	ND
Xylenes, Total	10	0.005 - 0.025	ND	ND
Total Petroleum Hydrocarbons				
Hydrocarbons as Diesel Fuel	NSV	54 - 66.7	ND	ND
Total Hydrocarbons	NSV	10 - 66.7	ND	ND

Notes:

[a] Values in bold type indicate that the detection limit exceeds the ESV.

[b] Analysis of chemical was performed by two different methods. Data were combined to include each sample analyzed for this chemical, irregardless of the method
The sample with the lowest detection limit was the one selected for inclusion in the dataset.

ESV ecological screening value
NA not available
ND not detected

Table 8-2
Comparison of Ecological Screening Values to Detection Limits in Surface Water

Chemical	ESV mg/L	Central Creek Detection Limits Minimum - Maximum	Saunders Branch Detection Limits Minimum - Maximum	Harrison Bayou Detection Limits Minimum - Maximum	Goose Prarie Creek Detection Limits Minimum - Maximum
Inorganics					
Aluminum	0.087	NA - NA	ND	NA - NA	**0.2** - **0.2**
Antimony	0.692	0.005 - 0.03	ND	0.005 - 0.03	0.005 - 0.1
Arsenic	0.19	0.005 - 0.01	ND	0.005 - 0.01	0.002 - 0.01
Barium	0.004	**0.2** - **0.2**	NA - NA	**0.2** - **0.2**	**0.2** - **0.2**
Beryllium	0.0053	0.0005 - 0.0005	ND	0.0005 - 0.0005	0.0005 - 0.0005
Cadmium	0.0006	**0.0008** - **0.005**	ND	ND	ND
Calcium	Nutrient	5 - 5	ND	5 - 5	5 - 5
Chloride	230	2 - 2	NA - NA	2 - 2	0.4 - 2
Chromium	0.0106	0.01 - **0.05**	ND	0.01 - **0.05**	0.01 - **0.02**
Copper	0.007	0.005 - **0.025**	0.005 - 0.005	0.005 - **0.025**	0.005 - **0.025**
Iron	1	NA - NA	ND	NA - NA	NA - NA
Lead	0.001	**0.002** - **0.04**	**0.002** - **0.01**	**0.002** - **0.02**	**0.002** - **0.003**
Magnesium	Nutrient	ND	ND	5 - 5	5 - 5
Manganese	0.12	NA - NA	ND	NA - NA	NA - NA
Nickel	0.087	ND	ND	0.04 - 0.05	ND
Potassium	Nutrient	ND	ND	5 - 5	2 - 5
Selenium	0.005	ND	ND	**0.005** - **0.01**	0.002 - **0.02**
Sodium	Nutrient	5 - 5	ND	5 - 5	5 - 5
Strontium	1.5	0.05 - 0.05	ND	0.05 - 0.05	0.05 - 0.05
Thallium	0.04	ND	ND	0.001 - **0.05**	0.001 - **0.5**
Tin	0.073	ND	ND	ND	**0.1** - **0.1**
Vanadium	0.02	**0.05** - **0.05**	ND	**0.05** - **0.05**	ND
Zinc	0.0581	0.02 - 0.02	NA - NA	0.02 - 0.02	0.02 - 0.02
General Chemistry					
Nitrate/Nitrite	0.06	**0.1** - **0.1**	ND	0.05 - **0.1**	**0.1** - **0.1**
Nitrate (as N)	0.06	0.05 - **0.1**	0.01 - 0.01	0.01 - **0.1**	**0.1** - **0.1**
Sulfate	NSV	1 - 2	1 - 1	1 - 2	2 - 2
Total Cyanide	0.0107	ND	ND	ND	0.01 - 0.01
Perchlorate					
Ammonium perchlorate	9.3	ND	ND	ND	0.001 - 0.004
Perchlorate	9.3	ND	ND	0.004 - 0.09	0.004 - 0.008
Nitroaromatics					
2,4,6-Trinitrotoluene	0.1	ND	ND	ND	0.0000194 - 0.0007
2,4-Dinitrotoluene	2.43	ND	ND	ND	0.00002 - 0.01
2,6-Dinitrotoluene	2.43	ND	ND	ND	0.0000266 - 0.01
2-amino-4,6-Dinitrotoluene	0.02	ND	ND	ND	0.000035 - 0.00096
4-amino-2,6-Dinitrotoluene	0.02	ND	ND	ND	0.0000434 - 0.00065
2-Nitrotoluene	0.88	0.0001 - 0.0004	ND	ND	0.0000332 - 0.0013
4-Nitrotoluene	1.9	ND	ND	ND	0.0000398 - 0.0013
HMX	0.15	ND	ND	ND	0.0000258 - 0.0008
RDX	0.36	ND	ND	ND	0.0000219 - 0.00084
Tetryl	5.8	ND	ND	ND	0.0000901 - 0.0008
Dioxins/Furans					
2,3,7,8-TCDD TEQ	3.00E-12	NA - NA	ND	NA - NA	NA - NA
Semivolatile Organics					
1,2,4-Trichlorobenzene	0.051	ND	ND	0.00032 - 0.011	0.00018 - 0.01
1,3-Dinitrobenzene	0.144	0.0001 - 0.0002	ND	ND	0.0000168 - 0.00065
1,4-Dichlorobenzene	0.11	ND	ND	0.0002 - 0.011	0.00014 - 0.01
bis(2-Ethylhexyl) phthalate	0.007	ND	ND	ND	0.00092 - **0.01**
Diethyl phthalate	2.09	ND	ND	ND	0.001 - 0.01
Hexachlorobutadiene	0.00093	ND	ND	0.0002 - **0.011**	ND
Naphthalene	0.49	ND	ND	0.001 - 0.011	0.00015 - 0.01
Volatile Organics					
1,1-Dichloroethene	3	ND	ND	0.0002 - 0.005	0.0002 - 0.005
1,2-Dichloroethane	6.3	ND	ND	0.00031 - 0.005	ND
1,3,5-Trinitrobenzene	0.011	ND	ND	ND	0.0000549 - 0.0013
2-Butanone	84.8	ND	ND	0.005 - 0.1	0.00081 - 0.1
Acetone	202.4	0.005 - 0.1	0.01 - 0.1	0.005 - 0.1	0.0022 - 0.02
Bromodichloromethane	4.32	ND	ND	ND	0.00015 - 0.005
Carbon disulfide	0.21	ND	ND	0.001 - 0.005	0.0009 - 0.005
Chlorobromomethane	11	ND	ND	ND	0.00013 - 0.005
Chloroform	0.89	ND	ND	ND	0.00017 - 0.005
Chloromethane	55	ND	ND	0.0005 - 0.01	ND
cis-1,2-Dichloroethene	14	ND	ND	0.0002 - 0.005	0.00018 - 0.005

Table 8-2
Comparison of Ecological Screening Values to Detection Limits in Surface Water

Chemical	ESV mg/L	Central Creek Detection Limits Minimum - Maximum	Saunders Branch Detection Limits Minimum - Maximum	Harrison Bayou Detection Limits Minimum - Maximum	Goose Prarie Creek Detection Limits Minimum - Maximum
Volatile Organics (continued)					
Dibromochloromethane	0.257	ND	ND	ND	0.00016 - 0.005
Methylene chloride	22	0.001 - 0.01	ND	0.00022 - 0.05	0.00022 - 0.01
p-Cymene	0.085	ND	ND	0.0002 - 0.005	0.0002 - 0.001
Styrene	2.5	ND	ND	0.0002 - 0.005	0.00015 - 0.005
Tetrachloroethene	0.79	ND	ND	0.00025 - 0.005	0.00021 - 0.005
Toluene	2.9	ND	ND	0.0005 - 0.005	0.00022 - 0.005
trans-1,2-Dichloroethene	22	ND	ND	0.00029 - 0.005	0.00029 - 0.005
Trichloroethene	1.11	ND	ND	0.0005 - 0.005	0.00016 - 0.005
Vinyl Chloride	5.63	ND	ND	0.00024 - 0.01	0.00024 - 0.01

Notes:
[a] Values in bold type indicate that the detection limit exceeds the ESV.
ESV ecological screening value
NA not available
ND not detected

Table 8-3
Comparison of Ecological Screening Values to Detection Limits in Sediment

Chemical	ESV mg/kg	Central Creek Detection Limits Minimum - Maximum	Saunders Branch Detection Limits Minimum - Maximum	Harrison Bayou Detection Limits Minimum - Maximum	Goose Prarie Creek Detection Limits Minimum - Maximum
Inorganics					
Aluminum	12	NA - NA	NA - NA	NA - NA	NA - NA
Antimony	2	ND	ND	ND	1.14 - **14.8**
Arsenic	5.9	0.67 - 2.38	NA - NA	1.285 - 1.72	1.31 - 1.37
Barium	3.4	NA - NA	NA - NA	NA - NA	**27** - **27**
Beryllium	4.1	0.6635 - 0.986	NA - NA	0.644 - 0.772	0.653 - 1.24
Cadmium	0.6	0.1 - **2.38**	0.1 - **1.18**	**0.6** - **1.72**	**0.619** - **1.725**
Calcium	Nutrient	665 - 990	NA - NA	640 - 640	650 - 1200
Chloride	NSV	1 - 10	10 - 10	1 - 10	2.27 - 3.17
Chromium	37.3	NA - NA	1 - 1	NA - NA	NA - NA
Cobalt	50	6.8 - 9.9	NA - NA	6.4 - 9.79	1.6 - 12
Copper	35.7	3.315 - 4.93	NA - NA	3.22 - 3.22	1.6 - 3.77
Iron	20000	NA - NA	NA - NA	NA - NA	NA - NA
Lead	35	NA - NA	1 - 1	NA - NA	NA - NA
Magnesium	Nutrient	665 - 990	NA - NA	640 - 640	620 - 1200
Manganese	460	NA - NA	NA - NA	NA - NA	NA - NA
Mercury	0.174	0.12 - **0.24**	0.01 - **0.2**	0.01 - **0.26**	0.081 - **0.25**
Nickel	18	5.3 - 7.9	1 - 1	1.25 - 5.3	4.9 - 9.9
Potassium	Nutrient	665 - 990	NA - NA	0 - 0	162 - 1200
Selenium	1	0.5 - **2.38**	0.1 - **2**	0.1 - **1.84**	0.19 - **2.48**
Silver	1	ND	ND	ND	0.5 - **2.5**
Sodium	Nutrient	ND	ND	ND	131 - 1200
Strontium	150	6.65 - 9.9	NA - NA	6.4 - 6.4	6.2 - 12
Thallium	0.044	**0.2** - **1.61**	ND	**0.196** - **2.085**	**0.6** - **55.2**
Vanadium	4.1	**6.65** - **9.9**	NA - NA	NA - NA	NA - NA
Zinc	123	NA - NA	NA - NA	NA - NA	NA - NA
General Chemistry					
Nitrate (as N)	NSV	0.07 - 0.16	0.1 - 0.1	0.07 - 0.13	ND
Sulfate	NSV	1 - 1.1	10 - 10	NA - NA	2.6 - 3.45
Total Cyanide	0.0001	ND	ND	ND	**0.6255** - **1.192**
Nitroaromatics					
2,4,6-Trinitrotoluene	0.09	ND	ND	ND	**0.1** - **2.78**
2-amino-4,6-Dinitrotoluene	7.5	ND	ND	ND	0.05 - 2.78
4-amino-2,6-Dinitrotoluene	7.5	ND	ND	ND	0.05 - 2.78
Dioxins/Furans					
2,3,7,8-TCDD-TEQ	1.20E-07	NA - NA	NA - NA	NA - NA	NA - NA
Polychlorinated Biphenyls (PCBs)					
Aroclor 1254	0.06	ND	ND	ND	0.035 - **0.258**
Organochlorine Pesticides					
4,4'-DDD	0.00354	ND	ND	ND	0.002 - **0.0111**
4,4'-DDT	0.00119	ND	ND	ND	**0.002** - **0.0111**
Dieldrin	0.00285	ND	ND	ND	0.002 - **0.0111**
Semivolatile Organics					
Acenaphthylene	0.00587	ND	ND	ND	**0.067** - **5.7**
Anthracene	0.0572	ND	ND	ND	**0.067** - **5.7**
Benzo(a)anthracene	0.0317	ND	ND	ND	**0.067** - **5.7**
Benzo(a)pyrene	0.0319	ND	ND	ND	**0.067** - **2.8**
Benzo(b)fluoranthene	4	ND	ND	ND	0.067 - **5.7**
Benzo(g,h,i)perylene	0.17	ND	ND	ND	0.067 - **5.7**
Benzo(k)fluoranthene	0.24	ND	ND	ND	0.067 - **5.7**
bis(2-Ethylhexyl) phthalate	0.182	0.17 - **0.786**	0.17 - **6.55**	**0.33** - **0.569**	ND
Butyl benzyl phthalate	1.97	0.17 - 0.85	ND	ND	ND
Chrysene	0.0571	ND	ND	ND	**0.067** - **5.7**
Di-n-butyl phthalate	240	0.17 - 0.85	0.17 - 6.55	0.33 - 0.569	0.17 - 5.7
Dibenzofuran	0.42	ND	ND	ND	0.17 - **5.7**
Fluoranthene	0.111	0.067 - **0.786**	ND	ND	0.067 - **5.7**
Fluorene	0.0774	ND	ND	ND	0.067 - **5.7**
m-Cresol	0.0524	ND	ND	ND	**0.17** - **0.945**
Naphthalene	0.176	ND	ND	ND	0.002 - **0.5695**
p-Cresol	0.0202	ND	ND	ND	**0.17** - **5.7**
p-Cymene	NSV	ND	ND	ND	0.0011 - 0.012

Table 8-3
Comparison of Ecological Screening Values to Detection Limits in Sediment

Chemical	ESV mg/kg	Central Creek Detection Limits Minimum - Maximum	Saunders Branch Detection Limits Minimum - Maximum	Harrison Bayou Detection Limits Minimum - Maximum	Goose Prarie Creek Detection Limits Minimum - Maximum
Semivolatile Organics, continued					
Phenanthrene	0.0419	ND	ND	ND	**0.067** - **5.7**
Phenol	0.032	ND	ND	ND	**0.17** - **5.7**
Pyrene	0.053	**0.067** - **0.786**	ND	ND	**0.067** - **5.7**
Volatile Organics					
1,1-Dichloroethene	0.0194	ND	ND	0.0016 - **0.037**	0.0012 - 0.012
1,2-Dichloroethane	0.26	ND	ND	0.0016 - 0.037	ND
2-Butanone	0.0424	0.01 - **0.452**	ND	0.01 - **0.1**	0.011 - **0.222**
Acetone	0.0091	**0.01** - **0.1**	**0.0155** - **0.1**	**0.01** - **0.1**	**0.011** - **0.049**
Carbon disulfide	0.00086	**0.005** - **0.034**	**0.005** - **0.01**	ND	**0.0057** - **0.012**
cis-1,2-Dichloroethene	0.4	ND	ND	0.0016 - 0.0098	0.0012 - 0.012
Chlorobenzene	0.291	ND	ND	0.0013 - 0.037	ND
Ethylbenzene	0.175	ND	ND	ND	0.0011 - 0.012
Isobutanol	NSV	1.3 - 2	ND	ND	ND
Isopropylbenzene	NSV	0.0068 - 0.0098	ND	ND	ND
Methylene chloride	0.159	0.005 - 0.113	ND	ND	0.0011 - 0.0555
p-Cymene	NSV	0.0068 - 0.0098	ND	ND	ND
Styrene	0.254	ND	ND	0.0013 - 0.037	ND
Toluene	0.05	0.002 - 0.034	0.002 - 0.0161	ND	0.0011 - 0.012
Trichloroethene	0.112	0.002 - 0.034	ND	0.0031 - 0.037	0.002 - 0.025
Trichlorofluoromethane	0.00307	ND	ND	ND	0.0011 - **0.025**
Vinyl Chloride	0.2	ND	ND	0.0016 - 0.073	0.0012 - 0.025

Notes:
[a] Values in bold type indicate that the detection limit exceeds the ESV.
ESV ecological screening value
NA not available
ND not detected

Table 8-4

Comparison of Infrequently Detected [a] Non-Bioaccumulative Chemicals to Ecological Screening Values

Total Soil [b]

	Chemical	Detection Frequency	Percent Hits	Range of Values, mg/kg: Detected Concentrations Minimum - Maximum	Range of Values, mg/kg: Reporting Limits Minimum - Maximum	Statistical Distribution [c]	Mean mg/kg	95% UCL mg/kg [d]	Screening Concentration mg/kg [e]	ESV mg/kg [f]	HQ_{SCREEN}
Industrial Sub-Area	1,3,5-Trinitrobenzene	3 / 277	1	0.43 - 28.5	0.00025 - 2.6	L	3.12E-01	4.13E-01	4.13E-01	0.376	1.10
	2,4,6-Trinitrotoluene	7 / 277	3	3.6 - 57000	0.00025 - 160	L	2.07E+02	4.12E+02	4.12E+02	30	13.75
	gamma-BHC (Lindane)	2 / 170	1	0.000569 - 0.008	0.000152 - 0.071	L	1.28E-03	5.38E-03	5.38E-03	0.005	1
	2,6-Dinitrotoluene [g]	1 / 568	0.2	0.73 - 0.73	0.00026 - 7.8	L	2.36E-01	1.11E-01	1.11E-01	0.0328	3.40
	Benzoic Acid	8 / 448	2	0.0341 - 2.3	0.0261 - 20	L	8.16E-01	8.89E-01	8.89E-01	NSV	---
	Butyl benzyl phthalate	8 / 544	1	0.352 - 1.1	0.0261 - 7.8	L	2.22E-01	2.39E-01	2.39E-01	0.239	1.0
	Carbazole	1 / 197	1	0.26315 - 0.26315	0.0261 - 7.8	L	3.20E-01	6.96E-02 (i)	6.96E-02	NSV	---
	Dibenzofuran	2 / 545	0.4	0.03685 - 0.59	0.0261 - 7.8	L	2.45E-01	2.65E-01	2.65E-01	NSV	---
	Ethyl methanesulfonate	2 / 52	4	0.02525 - 0.03915	0.0261 - 0.352	L	1.79E-02	2.03E-02 (i)	2.03E-02	NSV	---
	Naphthalene [g]	6 / 565	1	0.18 - 3.912	0.0084 - 7.8	L	2.09E-01	2.17E-01	2.17E-01	0.0994	2.18
	p-Isopropyltoluene	3 / 63	4.8	0.006 - 0.032	0.005 - 0.0162	L	3.68E-03	4.91E-03	4.91E-03	NSV	---
Low Impact Sub-Area	Boron	5 / 107	4.7	1.8475 - 3.19	1.01 - 2.19	L	1.08E+00	1.17E+00	1.17E+00	0.5	2
	4-Aminobiphenyl	1 / 107	1	0.0383 - 0.0383	0.0274 - 0.383	L	2.35E-02	2.62E-02	2.62E-02	NSV	---
	4-Chloro-3-methylphenol	1 / 143	1	0.0458 - 0.0458	0.0274 - 3.6	L	1.67E-02	1.77E-02 (i)	1.77E-02	NSV	---
	Ethyl methanesulfonate	1 / 107	1	0.0413 - 0.0413	0.0274 - 0.383	L	2.35E-02	2.35E-02	2.35E-02	NSV	---
	Naphthalene	2 / 150	1	0.025125 - 0.98	0.0274 - 3.6	L	8.65E-02	1.16E-01	1.16E-01	0.0994	1.2
Waste Sub-Area	Benzoic Acid	1 / 42	2	0.0693 - 0.0693	0.0294 - 10.667	NP	1.30E+00	2.99E-02	2.99E-02	NSV	---

Notes:

[a] Detection frequency is less than 2 percent, or if 2% < FOD < 5% results of spatial evaluation demonstrate no hot spot.

[b] Total soil is defined as samples 0 to 3 feet below ground surface (bgs). Deeper samples were also considered total soil if at least 50% of their sampling depth interval was less than 3 ft bgs (e.g., 2 to 4 ft bgs).

[c] Statistical distribution: N = Normal distribution; L = Lognormal distribution; NP = Nonparametric distribution for those sample datasets that fail normal and lognormal distribution.

[d] The 95% upper confidence limit (UCL) calculated using bootstrapping with 5000 replications.

[e] The screening concentration used to calculate the HQ_{screen} is the 95% UCL.

[f] See Table 6-14.

[g] Analysis of chemical was performed by two different methods. Data were combined to include each sample analyzed for this chemical, regardless of the method. The sample with the lowest detection limit was the one selected for inclusion in the dataset.

COPEC constituent of potential ecological concern
ESV ecological screening value
HQ_{screen} screening-level hazard quotient
MDC maximum detected concentration
NA not applicable
NSV no screening value available
mg/kg milligrams per kilogram

Table 8-5
Comparison of Infrequently Detected [a] Non-Bioaccumulative Chemicals to Ecological Screening Values
Sediment

	Chemical	Detection Frequency	Percent Hits	Range of Values, mg/kg: Detected Concentration Minimum - Maximum	Range of Values, mg/kg: Reporting Limits Minimum - Maximum	Statistical Distribution [a]	Mean mg/kg	95% UCL mg/kg [b]		Screening Concentration mg/kg [c]	ESV mg/kg [d]	HQ_{SCREEN}
Goose Prairie Creek Watershed	Antimony	1 / 51	2.0	2.2 - 2.2	1.14 - 14.8	N	3.06E+00	---	e	2.20E+00	2	1.1
	Total Cyanide	1 / 25	4.0	0.948 - 0.948	0.6255 - 1.192	NP	4.10E-01	4.91E-01		4.91E-01	0.1	4.9
	2,4,6-Trinitrotoluene	3 / 71	4.2	3.8 - 121	0.1 - 2.78	NP	2.05E+00	3.74E+00		3.74E+00	0.092	40.7
	Acenaphthylene	1 / 60	1.7	0.0943 - 0.0943	0.067 - 5.7	NP	4.00E-01	---	e	9.43E-02	0.0059	16.0
	Anthracene	1 / 60	1.7	1.44 - 1.44	0.067 - 5.7	NP	4.22E-01	5.73E-01		5.73E-01	0.0572	10.0
	Benzo(a)anthracene	1 / 60	1.7	2.98 - 2.98	0.067 - 5.7	NP	4.48E-01	6.11E-01		6.11E-01	0.108	5.7
	Benzo(a)pyrene	1 / 60	1.7	2.59 - 2.59	0.067 - 2.8	NP	2.82E-01	3.82E-01		3.82E-01	0.15	2.5
	Benzo(g,h,i)perylene	1 / 60	1.7	2.72 - 2.72	0.067 - 5.7	NP	4.43E-01	6.07E-01		6.07E-01	0.17	3.6
	Benzo(k)fluoranthene	1 / 60	1.7	1.09 - 1.09	0.067 - 5.7	NP	4.16E-01	5.71E-01		5.71E-01	0.24	2.4
	Chrysene	1 / 60	1.7	2.87 - 2.87	0.067 - 5.7	NP	4.46E-01	6.08E-01		6.08E-01	0.166	3.7
	Fluoranthene	1 / 60	1.7	5.93 - 5.93	0.067 - 5.7	NP	4.97E-01	6.72E-01		6.72E-01	0.423	1.6
	Fluorene	1 / 60	1.7	0.453 - 0.453	0.067 - 5.7	NP	4.06E-01	---	e	4.53E-01	0.0774	5.9
	m-Cresol	1 / 26	3.8	0.0832 - 0.0832	0.17 - 0.945	N	2.16E-01	---	e	8.32E-02	0.0524	1.6
	p-Cresol	1 / 60	1.7	0.0832 - 0.0832	0.17 - 5.7	NP	4.32E-01	---	e	8.32E-02	0.0202	4.1
	Phenanthrene	2 / 60	3.3	0.0589 - 4.67	0.067 - 5.7	NP	4.75E-01	6.64E-01		6.64E-01	0.204	3.3
	Phenol	2 / 60	3.3	0.0426 - 0.0662	0.17 - 5.7	NP	4.30E-01	---	e	6.62E-02	0.032	2.1
	Pyrene	1 / 60	1.7	5.08 - 5.08	0.067 - 5.7	NP	4.83E-01	6.85E-01		6.85E-01	0.195	3.5
Central Creek Watershed	bis(2-Ethylhexyl) phthalate	1 / 31	3.2	1.16 - 1.16	0.17 - 0.786	L	2.44E-01	2.93E-01		2.93E-01	0.182	1.6

Notes and Abbreviations:

[a] Detection frequency is less than 2 percent, or if 2% < FOD < 5% results of spatial evaluation demonstrate no hot spot.

[b] The 95% upper confidence limit (UCL) calculated using bootstrapping with 5000 replications.

[c] The screening concentration used to calculate the HQ_{screen} is the 95% UCL, or the MDC if detection frequency is five or less after elimination of samples with elevated detection limits.

[d] See Table 6-16.

[e] The 95% UCL was not calculated because either there were five or less samples (after removal of samples with elevated detection limits) or the chemical was not selected as a COPEC even when the maximum detected concentration was used.

COPEC constituent of potential ecological concern
ESV ecological screening value
HQ_{screen} screening-level hazard quotient
MDC maximum detected concentration
mg/kg milligrams per kilogram
NA not applicable
NSV no screening value available

Table 8-6
Evaluation of Soil COPEC EPCs for Potential Bias Using 95 Percent UCL Concentration for Entire Sub-Areas, Compared with Smaller Area Associated with Receptor Home Range Footprint

COPEC [a]	MDC	95% UCL EPC [b]	(MDC) / (95% EPC)	Potentially Significant Bias? [c]	Samples with Concentration Above 95% UCL EPC:	Average Distance Between These Samples (feet)	Indication of Clustering? [D]
	mg/kg						
Industrial Sub-Area							
Inorganics							
Aluminum	4.04E+04	9.54E+03	4	No	-	-	-
Cadmium	3.75E+01	8.87E-01	42	No	-	-	-
Chromium	1.94E+02	1.88E+01	10	No	-	-	-
Copper	1.46E+03	1.76E+01	83	Yes	LAP-027A, LH-S117-01_1, 32SS02(0-0.5), LH-S79-01_1, LHS-MW50, LHS-MW60, LH-S723-01_1, LHS-MW2, LH-S10-02_1, MAM-P2571-SS, 49SB17(1-2), 46SD06-981110, 49SB07(0-0.5), 32SS02(1-3), LAP-026A, 49SB20(1-2), 49SB09(1-2), 49SB21(1-2), LH-DL723-01, 49SB25(0-0.5), 49SB36(1-3), 49SB30(1-2), 49SB08(1-2), 49SB04(1-2), 49SB14(1-2), 49SB24(0-0.5), 49SB01(1-2), 49SB35(1-3), 49SB17(0-0.5), 49SB23(1-2), 49SB21(0-0.5), 49SB11(0-0.5), 49SB30(0-0.5), 04SB03(0-0.5), 49SB26(1-2), 49SB25(1-2), 49SB20(0-0.5), 49SB22(1-2), 49SB09(0-0.5), LAP-0210, 49SB07(1-2), 49SB02(1-2), 49SB27(0-0.5), 32SS01(1-3), 49SB08(0-0.5)	2,200	NO
Iron	1.20E+05	1.74E+04	7	No	-	-	-
Lead	1.74E+03	4.75E+01	37	No	-	-	-
Mercury	1.05E+02	5.89E-01	178	Yes	49SB32(0-0.5), 49SB32(1-2), 49SB02(1-2), LH-S73-01_1, 08SB05(0-0.5), 49SB17(0-0.5), 08SB05(1-3), LH-DL723-01, 29WL11(CONTS)	4,030	NO
Nickel	5.48E+01	1.07E+01	5	No	-	-	-
Selenium	1.85E+02	1.50E+00	124	Yes	LHS-MW50, LHS-MW60, 46SD05-981110, 46SD01-981109, 35ASB05(0-0.5), MAM-P2268-SS, MAM-P2571-SS, MAM-P2237-SS, MAM-P2212-SS, 35BSB01(0-0.5), 46SD06-981110, 50SS07(0-0.5), MAM-P2544-SS, 46SB03(0-0.5), 32SS04(0-0.5), 32SS02(1-3), 35ASB03(0-0.5), MAM-W250-SS, 50SB06(0-0.5), 29SS07(0-0.5), 49SB13(0-0.5), 29SS03(0-0.5), MAM-GP150-SS 35CSB01(1-3), C-47SB01(0-0.5)-9807, 32SS01(0-0.5), 29SS01(0-0.5), 47SB01(1-3), 29SD26, 29SS06(0-0.5), MAM-W220-SS, 46SB03(1-3), CCSD01, MAM-P2586-SS, 32SS02(0-0.5), 32SD18-981008, 48SB01(1-3), 47SB02(1-3), 46SB01(1-3), 29SS06(1-3)	4,729	NO
Strontium	7.13E+03	5.39E+01	132	Yes	LH-S02-02_1, 49SB13(0-0.5), LH-S123-01_1, LH-S95-01_1, LH-DL95-01, 49SB27(0-0.5), LHS-MW50, LAP-022A, LAP-025A, LH-S12-01_1, 32SS02(0-0.5), LH-S95-02_1, LAP-023A, LAP-024A, LAP-021A, 49SB12(1-2), LAP-026A, LH-S03-01_1, LH-S86-01_1, 49SB17(1-2), LH-S22-01_1, 49SB09(1-2), 49SB20(1-2), LH-S02-01_1, LH-S61-02_1, 49SB08(0-0.5), LHS-MW52, 49SB07(0-0.5), 49SB04(1-2), C-SS-029, 49SB07(1-2), 49SB21(1-2), LAP-0210, 49SB22(1-2), 49SB01(1-2), 49SB02(1-2), 49SB28(1-2), LAP-027A, 49SB34(1-3), 49SB25(1-2), 04SB04(1-3)	4,268	NO
Vanadium	7.59E+01	2.60E+01	3	No	-	-	-
Zinc	2.58E+03	6.16E+01	42	No	-	-	-
General Chemistry							
Nitrate	5.15E+01	1.86E+00	28	No	-	-	-
Sulfate	5.40E+03	1.35E+02	40	No	-	-	-
Perchlorate							
Perchlorate	1.63E+02	3.79E+00	43	No	-	-	-
Dioxins/Furans							
2,3,7,8-TCDD TEQ	9.34E-05	7.62E-06	12	No	-	-	-
Polychlorinated Biphenyls (PCBs)							
Aroclor 1242	2.05E-02	7.73E-03	3	No	-	-	-
Aroclor 1248	4.02E-03	1.55E-03	3	No	-	-	-
Aroclor 1254	1.30E+00	5.39E-02	24	No	-	-	-
Aroclor 1260	1.79E-01	1.87E-02	10	No	-	-	-
Organochlorine Pesticides							
4,4'-DDD	2.49E-02	1.88E-03	13	No	-	-	-
4,4'-DDE	6.18E-01	1.72E-02	36	No	-	-	-
4,4'-DDT	1.85E-01	6.89E-03	27	No	-	-	-

Table 8-6
Evaluation of Soil COPEC EPCs for Potential Bias Using 95 Percent UCL Concentration for Entire Sub-Areas, Compared with Smaller Area Associated with Receptor Home Range Footprint

COPEC [a]	MDC	95% UCL EPC [b]	(MDC) / (95% EPC)	Potentially Significant Bias? [c]	Samples with Concentration Above 95% UCL EPC:	Average Distance Between These Samples (feet)	Indication of Clustering? [D]
	mg/kg						
Organochlorine Pesticides *(continued)*							
Aldrin	8.55E-02	2.82E-03	30	No	-	-	-
alpha-Chlordane	4.70E-02	2.60E-03	18	No	-	-	-
Chlordane	1.35E-03	2.39E-04	6	No	-	-	-
cis-Nonachlor	3.38E-03	3.91E-04	9	No	-	-	-
Dieldrin	1.16E-02	1.70E-03	7	No	-	-	-
Endrin	9.87E-04	4.06E-04	2	No	-	-	-
gamma-Chlordane	3.72E-02	5.38E-03	7	No	-	-	-
Heptachlor	4.84E-04	2.07E-04	2	No	-	-	-
Hexachlorobenzene	2.44E-01	1.08E-01	2	No	-	-	-
Pentachloroanisole	8.32E-03	8.77E-04	9	No	-	-	-
trans-Nonachlor	4.17E-03	4.15E-04	10	No	-	-	-
Low Impact Sub-Area							
Inorganics							
Cadmium	6.08E+00	3.95E-01	15	No	-	-	-
Chromium	5.94E+01	1.16E+01	5	No	-	-	-
Copper	1.18E+02	7.35E+00	16	No	-	-	-
Iron	4.84E+04	1.01E+04	5	No	-	-	-
Lead	1.97E+02	2.30E+01	9	No	-	-	-
Manganese	5.44E+03	9.62E+02	6	No	-	-	-
Mercury	2.31E-01	5.69E-02	4	No	-	-	-
Nickel	2.95E+01	6.83E+00	4	No	-	-	-
Selenium	2.30E+00	3.97E-01	6	No	-	-	-
Strontium	5.18E+01	1.43E+01	4	No	-	-	-
Vanadium	5.30E+01	1.54E+01	3	No	-	-	-
Zinc	4.99E+02	5.97E+01	8	No	-	-	-
General Chemistry							
Nitrate	5.33E+00	1.86E+00	3	No	-	-	-
Sulfate	4.90E+03	2.06E+03	2	No	-	-	-
Dioxins/Furans							
2,3,7,8-TCDD TEQ	9.40E-06	3.95E-06	2	No	-	-	-
Polychlorinated Biphenyls (PCBs)							
Aroclor 1242	1.05E-02	3.04E-03	3	No	-	-	-
Aroclor 1248	9.64E-03	1.37E-03	7	No	-	-	-
Aroclor 1254	2.08E-02	4.04E-03	5	No	-	-	-
Aroclor 1260	1.80E-01	6.22E-03	29	No	-	-	-
Aroclor 1268	1.54E-03	8.97E-04	2	No	-	-	-
Organochlorine Pesticides							
4,4'-DDD	6.28E-02	1.42E-03	44	No	-	-	-
4,4'-DDE	5.24E-02	4.15E-03	13	No	-	-	-
4,4'-DDT	6.37E-02	1.82E-03	35	No	-	-	-
Aldrin	4.86E-04	2.04E-04	2	No	-	-	-
alpha-Chlordane	3.01E-03	3.68E-04	8	No	-	-	-
Chlordane	4.62E-04	1.93E-04	2	No	-	-	-
cis-Nonachlor	1.92E-03	2.52E-04	8	No	-	-	-
Dieldrin	5.30E-04	1.88E-04	3	No	-	-	-
Endrin	1.50E-03	2.77E-04	5	No	-	-	-
Hexachlorobenzene	1.78E-03	2.36E-04	8	No	-	-	-
Mirex	2.41E-03	3.43E-04	7	No	-	-	-
Oxychlordane	5.54E-04	1.84E-04	3	No	-	-	-
Pentachloro-anisole	3.15E-02	9.03E-04	35	No	-	-	-
trans-Nonachlor	1.98E-03	3.16E-04	6	No	-	-	-
Perchlorate							
Perchlorate	2.80E-01	9.01E-02	3	No	-	-	-
Semivolatile Organics							
Benzoic Acid	1.56E-01	2.50E-02	6	No	-	-	-
Waste Sub-Area							
Inorganics							
Aluminum	2.15E+04	9.30E+03	2	No	-	-	-
Barium	2.05E+04	5.53E+02	37	No	-	-	-
Cadmium	7.33E+00	6.67E-01	11	No	-	-	-

Table 8-6
Evaluation of Soil COPEC EPCs for Potential Bias Using 95 Percent UCL Concentration for Entire Sub-Areas, Compared with Smaller Area Associated with Receptor Home Range Footprint

COPEC [a]	MDC	95% UCL EPC [b]	(MDC) / (95% EPC)	Potentially Significant Bias? [c]	Samples with Concentration Above 95% UCL EPC:	Average Distance Between These Samples (feet)	Indication of Clustering? [D]
	mg/kg						
Inorganics *(continued)*							
Chromium	5.96E+01	1.72E+01	3	No	-	-	-
Copper	5.31E+01	1.15E+01	5	No	-	-	-
Iron	2.60E+04	1.42E+04	2	No	-	-	-
Lead	1.29E+03	5.58E+01	23	No	-	-	-
Mercury	1.10E+00	9.67E-02	11	No	-	-	-
Nickel	3.40E+01	8.42E+00	4	No	-	-	-
Selenium	1.94E+00	6.71E-01	3	No	-	-	-
Strontium	7.10E+01	2.71E+01	3	No	-	-	-
Vanadium	4.33E+01	2.36E+01	2	No	-	-	-
Zinc	2.50E+02	5.17E+01	5	No	-	-	-
General Chemistry							
Nitrate	1.18E+01	1.34E+00	9	No	-	-	-
Sulfate	3.82E+03	4.00E+02	10	No	-	-	-
Dioxins/Furans							
2,3,7,8-TCDD TEQ	1.98E-04	3.40E-05	6	No	-	-	-
Nitroaromatics							
1,3,5-Trinitrobenzene	3.60E+02	1.71E+01	21	No	-	-	-
2,4,6-Trinitrotoluene	1.00E+04	2.87E+02	35	No	-	-	-
2,4-Dinitrotoluene	4.00E+03	1.01E+02	40	No	-	-	-
2,6-Dinitrotoluene	5.00E+02	1.36E+01	37	No	-	-	-
HMX	1.20E+01	1.36E+00	9	No	-	-	-
Polychlorinated Biphenyls (PCBs)							
Aroclor 1242	5.16E-03	3.08E-03	2	No	-	-	-
Aroclor 1254	1.11E-02	6.24E-03	2	No	-	-	-
Aroclor 1260	5.16E-03	2.60E-03	2	No	-	-	-
Organochlorine Pesticides							
4,4'-DDD	1.00E-03	5.15E-04	2	No	-	-	-
4,4'-DDE	5.77E-03	2.45E-03	2	No	-	-	-
4,4'-DDT	3.77E-04	2.93E-04	1	No	-	-	-
alpha-Chlordane	4.03E-04	2.13E-04	2	No	-	-	-
Endrin	1.04E-03	4.91E-04	2	No	-	-	-
Mirex	6.29E-04	2.89E-04	2	No	-	-	-
Pentachloroanisole	4.28E-04	2.58E-04	2	No	-	-	-
Perchlorate							
Perchlorate	7.11E+00	2.61E-01	27	No	-	-	-
Semivolatile Organics							
Butyl benzyl phthalate	3.00E+00	5.43E-01	6	No	-	-	-
Hexachlorobenzene	2.80E-01	1.10E-01	3	No	-	-	-

Notes:

[a] COPEC in soil from soil screening tables

[b] 95% UCL EPC is 95% upper confidence limit exposure point concentration

[c] A potentially significant bias is indicated if the MDC is more than 50 times the 95% UCL EPC, where bias is defined as potentially underestimating the EPC by using the entire sub-area data base, compared with soil samples from a receptor's HR footprint.

[d] A clustering of "hot spot" samples is suggested if the average distance between the "elevated concentration" samples is less than 100 feet

Terrestrial receptors with small average HRs include the deer mouse (HR = 0.15 acres) and the short tailed shrew (HR = 1.0 acres).

0.15 acre HR is approximately 80 feet by 80 feet

1.0 acre HR is approximately 210 feet by 210 feet

COPEC constituents of potential ecological concern
EPC exposure point concentration
HR home range
MDC maximum detected concentration

Table 8-7
Comparison of Modeled Brown Bullhead Tissue Concentrations From Sediment with Measured Values
Goose Prairie Creek Watershed

COPEC	Number of Sediment Samples	Tier 1 Upperbound Approach (mg/kg)				Tier 2 Average Approach (mg/kg)			
		Modeled Fish Tissue Concentration [a]	Measured Fish Tissue Concentration [b]	(Modeled) / (Measured)		Modeled Fish Tissue Concentration [c]	Measured Fish Tissue Concentration [d]	(Modeled) / (Measured)	
Aluminum	53	5.99	160		0.037	5.22	49.35		0.11
Barium	69	NA	23		NA	NA	12.3		NA
Cadmium	186	1.05	<0.5	>	4.2	0.0725	<0.5		NC
Copper	58	14	<1.0	>	28	3.53	<1.0	>	7.1
Iron	53	NA	270		NA	NA	127		NA
Lead	69	10.7	<1.0	>	21	0.975	<1.0	>	2.0
Manganese	142	NA	31		NA	NA	15.05		NA
Mercury	69	1.48	<0.2	>	15	0.468	<0.2	>	4.7
Nickel	65	30.2	<1.5	>	40	5.49	<1.5	>	7.3
Selenium	69	0.175	<2.5		NC	0.149	<2.5		NC
Silver	69	2.39	<0.5	>	9.6	1.85	<0.5	>	7.4
Vanadium	49	6.29	<1.0	>	13	1.59	<1.0	>	3.2
Thallium	69	0.26	<1.0		NC	0.0062	<1.0		NC
Zinc	58	170	20		9	36.2	16		2.3
Acetone	65	0.0249	<0.5		NC	0.0105	<0.5		NC
Aroclor-1254	41	0.145	<0.05	>	5.8	0.0145	<0.05		NC
Bis(2-ethylhexyl)phthalate	nd	NA	0.72		NA	NA	0.30		NA
DDD	43	0.000249	<0.01		NC	0.000122	<0.01		NC
DDT	43	0.000559	<0.01		NC	0.000272	<0.01		NC
Dieldrin	43	0.00131	<0.01		NC	0.000634	<0.01		NC
2,3,7,8-TCDD TEQ	11	4.60E-06	<1.8E-06	>	5.1	3.50E-07	<1.6E-06		NC

Notes and Abbreviations:

[a] Using TrophicTrace sediment-to-fish-tissue model (Tier 1 Upperbound Approach).

[b] Results from GPC Cove whole-body brown bullheads (maximum of 4 fish) (USEPA Region 6, 2004)

[c] Using TrophicTrace sediment-to-fish-tissue model (Tier 2 Average Approach).

[d] Results from GPC Cove whole-body brown bullheads (average of 4 fish) (USEPA Region 6, 2004)

NA not available, as constituent not selected as a COPEC for this medium in the ERA.

NC not calculated, as measured fish tissue concentration nondetect, and one-half of the detection limit greater than modeled concentration.

If the measured concentration was nondetect, one-half of the detection limit was used to calculate the uptake ratio.

TEQ toxicity equivalence concentration. Most of the TEQ was due to non-detect congeners, however, two congeners were detected (OCDD and 1,2,3,4,6,7,8-HpCDD).

GPC Goose Prairie Creek

All concentrations in mg/kg.

Table 8-8
Comparison of Modeled Fathead Minnow Tissue Concentrations From Surface Water with Measured Sunfish Values
Goose Prairie Creek Watershed

COPEC	Number of Surface Water Samples	Tier 1 Upperbound Approach (mg/kg)				Tier 2 Average Approach (mg/kg)			
		Modeled Fish Tissue Concentration [a]	Measured Fish Tissue Concentration [b]	(Modeled) / (Measured)		Modeled Fish Tissue Concentration [c]	Measured Fish Tissue Concentration [d]	(Modeled) / (Measured)	
Aluminum	35	1.81	<2.5	>	1.4	1.49	<2.5	>	1.2
Barium	50	36.4	1.2		30	0.552	<1.0	>	1.1
Cadmium	nd	NA	<0.5		NA	NA	<0.5		NA
Copper	41	16.8	<1.0	>	34	2.73	<1.0	>	5.5
Iron	35	628	69		9.1	134	15		8.9
Lead	50	2.33	<1.0	>	4.7	0.561	<1.0	>	1.1
Manganese	35	109	<1.0	>	218	10.6	<1.0	>	21
Mercury	nd	NA	0.68		NA	NA	0.22		NA
Nickel	nd	NA	<1.5		NA	NA	<1.5		NA
Selenium	50	0.153	<2.5		NC	0.132	<2.5		NC
Silver	nd	NA	<0.5		NA	NA	<0.5		NA
Vanadium	nd	NA	<1.0		NA	NA	<1.0		NA
Thallium	50	3.72	<1.0	>	7.4	0.015	<1.0		NC
Zinc	41	87.8	13		6.8	37.8	5.9		6.4
Bis(2-ethylhexyl)phthalate	53	7.53	0.61		12	2.04	0.27		7.6
2,4-DNT	206	0.0077	< 0.2		NC	0.0059	< 0.2		NC
2,3,7,8-TCDD TEQ	10	2.92E-04	< 1.8E-06	>	324	3.22E-05	< 1.3E-06	>	50

Notes and Abbreviations:

[a] Using surface water-to-fish-tissue model for fathead minnow (Tier 1 Upperbound Approach).

[b] Results from GPC Cove filleted sunfish (maximum of 28 fish - redear, black crappie, warmouth, bluegill, large mouth bass) (USEPA Region 6, 2004)

[c] Using surface water-to-fish-tissue model for fathead minnow (Tier 2 Average Approach).

[d] Results from GPC Cove filleted sunfish (average of 28 fish - redear, black crappie, warmouth, bluegill, large mouth bass) (USEPA Region 6, 2004).

NA not available, as constituent not selected as a COPEC for this medium in the ERA.

NC not calculated, as measured fish tissue concentration nondetect, and one-half of the detection limit greater than modeled concentration.

If the measured concentration was nondetect, one-half of the detection limit was used to calculate the uptake ratio.

TEQ toxicity equivalence concentration

GPC Goose Prairie Creek

All concentrations in mg/kg.

Table 8-9
Brown Bullhead Hazards Based on Modeled Tissue Concentrations from Sediment

COPEC [a]	Estimated Catfish Concentration from Sediment (mg/kg wet weight)		Fish Critical Body Residue (CBR) values (mg/kg wet weight)		Tier 1 Catfish Hazard Quotient (from Sediment COPEC) [c]		Tier 2 Catfish Hazard Quotient (from Sediment COPEC) [c]	
	Tier 1	Tier 2	Bounded NOAEL	Bounded LOAEL	NOAEL-Based	LOAEL-Based	NOAEL-Based	LOAEL-Based
Aluminum	5.99	5.22	12.8	20	0.47	0.30	0.41	0.26
Cadmium	1.05	0.0725	0.05	0.1	21	11	1.5	0.73
Copper	14	3.53	3.92	4.48	3.6	3.1	0.90	0.79
Lead	10.7	0.975	2.54	4	4.2	2.7	0.38	0.24
Mercury	1.48	0.468	0.8	1.3	1.9	1.1	0.59	0.36
Nickel	30.2	5.49	1.18	11.81	26	2.6	4.7	0.46
Selenium	0.175	0.149	1.1	1.3	0.16	0.13	0.14	0.11
Silver	2.39	1.85	0.06	0.24	40	10	31	7.7
Thallium	0.26	0.0062	2.72	NVA	0.10	NVA	0.0023	NVA
Vanadium	6.29	1.59	0.57	2.22	11	2.8	2.8	0.72
Zinc	170	36.2	19.3	22.6	8.8	7.5	1.9	1.6
2,3,7,8-TCDD TEQ	4.58E-06	3.50E-07	1.25E-04	2.32E-04	0.037	0.020	0.0028	0.0015
4,4'-DDD	2.49E-04	1.22E-04	1.92	2	0.00013	0.00012	0.000064	0.000061
4,4'-DDT	5.59E-04	2.72E-04	1.92	2	0.00029	0.00028	0.00014	0.00014
Acetone	0.0249	0.0105	26.6	266	0.00094	0.000094	0.00039	0.000039
Aroclor-1254	0.145	0.0145	0.76	1.53	0.19	0.095	0.019	0.0095
Dieldrin	1.31E-03	6.34E-04	0.12	2	0.011	0.00066	0.0053	0.00032

Notes and Abbreviations:

[a] Chemicals of Potential Ecological Concern (COPECs) identified based on results of sediment screening assessment.

[b] Catfish concentration estimated to result from bioaccumulation from sediment to fish tissue.

[c] Hazard quotient estimated by dividing catfish concentration by fish CBR.

Tier 1 Upper-bound approach

Tier 2 Average approach

NOAEL no observed adverse effect level

LOAEL lowest observed adverse effect level

NVA no value available.

TEQ toxicity equivalent concentration

Bold hazard quotients are above target HQ of 1.

Table 8-10
Fathead Minnow Hazards Based on Modeled Tissue Concentrations from Surface Water

COPEC [a]	Estimated Fathead Minnow Concentration from Surface Water (mg/kg wet weight) [b]		Fish Critical Body Residue (CBR) Values (mg/kg wet weight)		Tier 1 Minnow Hazard Quotient (from Surface Water COPEC) [c]		Tier 2 Minnow Hazard Quotient (from Surface Water COPEC) [c]	
	Tier 1	Tier 2	Bounded NOAEL	Bounded LOAEL	NOAEL-Based	LOAEL-Based	NOAEL-Based	LOAEL-Based
Aluminum	1.81	1.49	12.8	20	0.14	0.090	0.12	0.074
Barium	36.4	0.55	NVA	NVA	NVA	NVA	NVA	NVA
Copper	16.8	2.73	3.92	4.48	4.3	3.7	0.70	0.61
Iron	628	134	NVA	NVA	NVA	NVA	NVA	NVA
Lead	2.33	0.561	2.54	4	0.92	0.58	0.22	0.14
Manganese	109	10.6	NVA	NVA	NVA	NVA	NVA	NVA
Selenium	0.153	0.132	1.1	1.3	0.14	0.12	0.12	0.10
Thallium	3.72	0.015	2.72	NVA	1.4	NVA	0.0055	NVA
Zinc	87.8	37.8	19.3	22.6	4.5	3.9	2.0	1.7
2,3,7,8-TCDD TEQ	2.92E-04	3.23E-05	1.25E-04	2.32E-04	2.3	1.3	0.26	0.14
Bis(2-ethylhexyl)phthalate	7.53	2.045	0.66	NVA	11	NVA	3.1	NVA
2,4-DNT	0.0077	0.0059	0.0135 [d]	NVA	0.57	NVA	0.44	NVA

Notes and Abbreviations:

[a] Chemicals of Potential Ecological Concern (COPECs) identified based on results of surface water screening assessment.

[b] Fathead minnow concentration estimated to result from bioaccumulation from surface water to fish tissue.

[c] Hazard quotient estimated by dividing minnow concentration by fish CBR.

[d] TNT as surrogate for 2,4-DNT.

Tier 1 Upper-bound approach
Tier 2 Average approach
NOAEL no observed adverse effect level
LOAEL lowest observed adverse effect level

NVA no value available.
TEQ toxicity equivalent concentration
Bold hazard quotients are above target HQ of 1.

Table 8-11
Brown Bullhead Hazards Based on Measured Tissue Concentrations

COPEC [a]	Measured Catfish Concentration (mg/kg wet weight)		Fish Critical Body Residue (CBR) values (mg/kg wet weight)		Tier 1 Catfish Hazard Quotient [d]		Tier 2 Catfish Hazard Quotient [d]	
	Tier 1 [b]	Tier 2 [c]	Bounded NOAEL	Bounded LOAEL	NOAEL-Based	LOAEL-Based	NOAEL-Based	LOAEL-Based
Aluminum	160	49.35	12.8	20	12.5	8.0	3.9	2.5
Zinc	20	16	19.3	22.6	1.0	0.9	0.8	0.7

Notes and Abbreviations:

[a] COPECs identified based on results of sediment screening assessment, that had detected concentrations in fish tissue.

[b] Results from GPC Cove whole-body brown bullheads (maximum of 4 fish) (USEPA Region 6, 2004)

[c] Results from GPC Cove whole-body brown bullheads (average of 4 fish) (USEPA Region 6, 2004)

[d] Hazard quotient estimated by dividing catfish concentration by fish CBR.

Tier 1 Upper-bound approach

Tier 2 Average approach

NOAEL no observed adverse effect level

LOAEL lowest observed adverse effect level

Bold hazard quotients are above target HQ of 1.

Table 8-12
Sunfish Hazards Based on Measured Tissue Concentrations

COPEC [a]	Measured Sunfish Concentration (mg/kg wet weight)		Fish Critical Body Residue (CBR) values (mg/kg wet weight)		Tier 1 Sunfish Hazard Quotient [d]		Tier 2 Sunfish Hazard Quotient [d]	
	Tier 1 [b]	Tier 2 [c]	Bounded NOAEL	Bounded LOAEL	NOAEL-Based	LOAEL-Based	NOAEL-Based	LOAEL-Based
Zinc	13	5.9	19.3	22.6	0.7	0.6	0.3	0.3
Bis(2-ethylhexyl)pthalate	0.61	0.27	0.66	NVA	0.9	NVA	0.4	NVA

Notes and Abbreviations:

[a] COPECs identified based on results of surface water screening assessment, that had detected concentrations in fish tissue.

[b] Results from GPC Cove filleted sunfish (maximum of 28 fish - redear, black crappie, warmouth, bluegill, large mouth bass) (USEPA Region 6, 2004)

[c] Results from GPC Cove filleted sunfish (average of 28 fish - redear, black crappie, warmouth, bluegill, large mouth bass) (USEPA Region 6, 2004).

[d] Hazard quotient estimated by dividing catfish concentration by fish CBR.

Tier 1 Upper-bound approach
Tier 2 Average approach
NVA no value available
NOAEL no observed adverse effect level
LOAEL lowest observed adverse effect level
Bold hazard quotients are above target HQ of 1.

Table 8-13
Comparison of Wet Weather Surface Water Samples to Samples Used in Aquatic Ecological Risk Assessment
Harrison Bayou

Chemical (mg/L)	Samples Collected >500' from Stream or Wetland/Marsh Boundary [1]					MDC (Tbl 6-20) [2]	Exceeds MDC. (Y-N) [2]	ESV (Table 6-15) [3]	Exceeds ESV (Y-N) [3]	Exceeds MDC and ESV (Y-N) [4]
	Total	Detects	FOD	Min Detect	Max Detect					
1,3,5-Trinitrobenzene	28	1	4%		1.00E-04	ND	Y	1.10E-02	N	N
1,3-Dinitrobenzene	28	1	4%		1.00E-04	ND	Y	7.20E-02	N	N
2,4,6-Trinitrotoluene	28	1	4%		1.00E-04	ND	Y	5.00E-02	N	N
2,4-Dinitrotoluene	40	1	3%		1.00E-04	ND	Y	1.22E+00	N	N
2,6-Dinitrotoluene	40	1	3%		1.00E-04	ND	Y	1.22E+00	N	N
2-Amino-4,6-dinitrotoluene	28	1	4%		1.00E-04	ND	Y	7.40E-01	N	N
4-Amino-2,6-dinitrotoluene	28	1	4%		1.00E-04	ND	Y	7.40E-01	N	N
Acetone	32	6	19%	1.20E-02	2.90E-02	2.70E-02	Y	1.01E+02	N	N
Aluminum	6	6	100%	4.80E-01	8.30E+01	6.40E+01	Y	8.70E-02	Y	Y
Antimony	31	3	10%	5.00E-03	1.20E-02	3.20E-02	N	1.60E-01	N	N
Arsenic	31	6	19%	5.00E-03	3.61E-02	2.55E-02	Y	1.90E-01	N	N
Barium	31	24	77%	1.24E-01	3.84E+00	1.18E+00	Y	1.60E+01	N	N
Beryllium	6	1	17%		3.80E-03	3.10E-03	Y	5.30E-03	N	N
Cadmium	31	1	3%		6.10E-03	ND	Y	6.00E-04	Y	Y (IFD)
Calcium	6	5	83%	6.30E+00	9.70E+01	4.40E+01	Y	NUT	N	N
Chloride	14	12	86%	2.04E+00	3.08E+02	8.56E+01	Y	2.30E+02	Y	Y
Chromium	31	10	32%	1.09E-02	1.59E-01	8.50E-02	Y	1.00E-02	Y	Y
Copper	23	10	43%	5.00E-03	8.90E-02	1.00E-01	N	1.00E-02	Y	N
HMX	28	1	4%		2.00E-04	ND	Y	1.50E-01	N	N
Iron	6	6	100%	5.60E-01	1.20E+02	9.15E+01	Y	1.00E+00	Y	Y
Lead	31	26	84%	3.21E-03	1.08E-01	5.95E-02	Y	1.00E-03	Y	Y
Magnesium	6	1	17%		3.60E+01	5.90E+01	N	NUT	N	N
Manganese	6	6	100%	9.40E-02	3.11E+00	1.77E+00	Y	1.20E-01	Y	Y
Mercury	31	4	13%	2.00E-04	2.00E-03	ND	Y	1.30E-03	Y	Y
m-Nitrotoluene	28	1	4%		2.00E-04	ND	Y	4.40E-01 [5]	N	N
Naphthalene	18	1	6%		1.10E-02	4.30E-04	Y	2.50E-01	N	N
Nickel	31	5	16%	4.10E-02	1.19E-01	9.00E-02	Y	8.70E-02	Y	Y
Nitrobenzene	40	1	3%		1.00E-04	ND	Y	2.70E-01	N	N
o-Nitrotoluene	28	1	4%		2.00E-04	ND	Y	4.40E-01	N	N
p-Nitrotoluene	28	1	4%		2.00E-04	ND	Y	9.50E-01	N	N
Potassium	6	2	33%	6.00E+00	1.80E+01	1.50E+01	Y	NUT	N	N
RDX	28	1	4%		2.00E-04	ND	Y	1.80E-01	N	N
Selenium	31	1	3%		1.70E-02	6.00E-03	Y	5.00E-03	Y	Y (IFD)

Notes:

[1] Detected surface water samples not used in Step 3 ERA because they were associated with wet weather events. 33 of 187 constituents were detected.

[2] Maximum detected concentrations from Step 3 Report for the Installation-Wide ERA, LHAAP, Karnack, Texas, November 2004, *Draft Final* .

[3] Ecological Screening Values from revised Step 3 Report for the Installation-Wide ERA, LHAAP, Karnack, Texas, 2006, Final

[4] Y (IFD) - Wet weather MDC exceeds the Step 3 ERA MDC and ESV, however the wet weather detection frequency is less than 5%

[5] o-nitrotoluene used as surrogate.

Table 8-14
Comparison of Wet Weather Surface Water Samples to Samples Used in Aquatic Ecological Risk Assessment
Goose Prairie Creek

Chemical (mg/L)	Samples Collected >500' from Stream or Wetland/Marsh Boundary [1]					MDC (Tbl 6-22) [2]	Exceeds MDC. (Y-N) [2]	ESV (Table 6-15) [3]	Exceeds ESV (Y-N) [3]	Exceeds MDC and ESV (Y-N) [4]
	Total	Detects	FOD	Min Detect	Max Detect					
2-Butanone	25	1	4%		5.70E-03	1.11E-02	N	4.24E+01	N	N
Aluminum	10	10	100%	4.80E-01	2.10E+02	1.10E+01	Y	8.70E-02	Y	Y
Antimony	29	4	14%	5.00E-03	3.70E-02	6.80E-02	N	1.60E-01	N	N
Arsenic	29	4	14%	1.70E-02	6.60E-02	1.70E-02	Y	1.90E-01	N	N
Barium	29	21	72%	5.90E-02	3.30E+00	2.20E+00	Y	1.60E+01	N	N
Beryllium	10	1	10%		1.19E-02	1.40E-03	Y	5.30E-03	Y	Y
bis(2-Ethylhexyl)phthalate	24	2	8%	2.00E-03	2.00E-03	5.30E-01	N	3.00E-01	N	N
Cadmium	29	1	3%		6.70E-03	ND	Y	6.00E-04	Y	Y (IFD)
Calcium	10	9	90%	5.70E+00	5.80E+01	1.50E+01	Y	NUT	N	N
Chloride	20	17	85%	1.07E+00	2.52E+01	2.14E+01	Y	2.30E+02	N	N
Chromium	29	3	10%	6.00E-02	2.30E-01	1.10E-02	Y	1.06E-02	Y	Y
Cobalt	10	1	10%		1.20E-01	ND	Y	1.50E+00	N	N
Copper	14	5	36%	9.00E-03	1.06E-01	4.40E-02	Y	7.00E-03	Y	Y
Iron	10	10	100%	8.30E-01	2.20E+02	1.20E+01	Y	1.00E+00	Y	Y
Lead	29	21	72%	2.61E-03	2.92E-01	6.90E-02	Y	1.00E-03	Y	Y
Magnesium	10	1	10%		1.30E+01	5.60E+00	Y	NUT	N	N
Manganese	10	10	100%	3.50E-02	1.18E+01	1.20E+00	Y	1.20E-01	Y	Y
m-Nitrotoluene	35	1	3%		3.60E-03	ND	Y	4.40E-01 [5]	N	N
Nickel	29	1	3%		1.10E-01	ND	Y	8.74E-02	Y	Y (IFD)
Nitrate	15	9	60%	2.00E-02	5.45E+00	3.78E+00	Y	6.00E-02	Y	Y
Potassium	10	4	40%	5.20E+00	1.70E+01	5.70E+00	Y	NUT	N	N

Notes:
[1] Detected surface water samples not used in in Step 3 ERA because they were associated with wet weather events. 22 of 187 constituents were detected.
[2] Maximum detected concentrations from Step 3 Report for the Installation-Wide ERA, LHAAP, Karnack, Texas, November 2004, *Draft Final* .
[3] Ecological Screening Values from revised Step 3 Report for the Installation-Wide ERA, LHAAP, Karnack, Texas, 2006, *Final* .
[4] Y (IFD) - Wet weather MDC exceeds the Step 3 ERA MDC and ESV, however the wet weather detection frequency is less than 5%.
[5] o-nitrotoluene used as surrogate.

Table 8-15
Comparison of Wet Weather Surface Water Samples to Samples Used in Aquatic Ecological Risk Assessment
Central Creek

	Samples Collected >500' from Stream or Wetland/Marsh Boundary [1]									
Chemical (mg/L)	Total	Detects	FOD	Min Detect	Max Detect	MDC (Tbl 6-24) [2]	Exceeds MDC (Y-N) [2]	ESV (Table 6-15) [3]	Exceeds ESV (Y-N) [3]	and ESV (Y-N)
Aluminum	2	1	50%		7.80E-01	1.79E+01	N	8.70E-02	Y	N
Antimony	7	2	29%	9.00E-03	1.20E-02	1.90E-02	N	1.60E-01	N	N
Arsenic	7	1	14%		1.20E-02	1.33E-02	N	1.90E-01	N	N
Barium	7	5	71%	2.84E-02	2.91E-01	3.75E-01	N	1.60E+01	N	N
Calcium	2	2	100%	8.60E+00	2.50E+01	1.10E+01	Y	NUT	N	N
Chloride	5	4	80%	2.50E+00	3.18E+01	9.98E+00	Y	2.30E+02	N	N
Chromium	7	1	14%		1.20E-02	1.75E-02	N	1.06E-02	Y	N
Copper	4	2	50%	1.20E-02	1.40E-02	2.80E-02	N	7.00E-03	Y	N
Iron	2	2	100%	1.40E+00	1.70E+00	1.59E+01	N	1.00E+00	Y	N
Lead	7	2	29%	4.00E-03	1.00E-02	3.40E-02	N	1.00E-03	Y	N
Magnesium	2	2	100%	5.30E+00	1.90E+01	ND	Y	NUT	N	N
Manganese	2	2	100%	1.34E-01	2.67E-01	1.17E+00	N	1.20E-01	Y	N
Nitrate / Nitrite	2	2	100%	1.59E-01	2.05E-01	9.40E-02	Y	6.00E-02	Y	Y
p-Nitrotoluene	7	1	14%		1.30E-03	ND	Y	9.50E-01	N	N

Notes:

[1] Detected surface water samples not used in in Step 3 ERA because they were associated with wet weather events. 15 of 187 constituents were detected.

[2] Maximum detected concentrations from Step 3 Report for the Installation-Wide ERA, LHAAP, Karnack, Texas, November 2004, *Draft Final* .

[3] Ecological Screening Values from revised Step 3 Report for the Installation-Wide ERA, LHAAP, Karnack, Texas, 2006, *Final* .

Table 8-16
Comparison of Wet Weather Surface Water Samples to Samples Used in Aquatic Ecological Risk Assessment
Saunders Branch

	Samples Collected >500' from Stream or Wetland/Marsh Boundary [1]									
Chemical (mg/L)	Total	Detects	FOD	Min Detect	Max Detect	MDC (Tbl 6-26) [2]	Exceeds MDC (Y-N) [2]	ESV (Table 6-15) [3]	Exceeds ESV (Y-N) [3]	and ESV (Y-N)
Acetone	5	1	20%		2.20E-02	1.10E-02	Y	1.01E+02	N	N
Arsenic	5	1	20%		5.00E-02	ND	Y	1.90E-01	N	N
Barium	5	5	100%	7.00E-02	1.22E+00	4.30E-01	Y	1.60E+01	N	N
Chloride	4	4	100%	2.60E+00	7.00E+00	9.70E+00	N	2.30E+02	N	N
Chromium	5	2	40%	1.04E-02	7.53E-02	ND	Y	1.06E-02	Y	Y
Lead	5	4	80%	3.00E-03	5.84E-02	3.00E-03	Y	1.00E-03	Y	Y
Nickel	5	1	20%		6.96E-02	ND	Y	8.74E-02	N	N
Nitrate	4	1	25%		3.00E-01	9.00E-02	Y	6.00E-02	Y	Y
Sulfate	4	4	100%	2.00E+00	1.28E+01	5.00E+00	Y	NVA [4]	N	N
Zinc	1	1	100%		1.20E-02	5.20E-02	N	6.00E-02	N	N

Notes:

[1] Detected surface water samples not used in in Step 3 ERA because they were associated with wet weather events. 10 of 144 constituents were detected.

[2] Maximum detected concentrations from Step 3 Report for the Installation-Wide ERA, LHAAP, Karnack, Texas, November 2004, *Draft Final*.

[3] Ecological Screening Values from revised Step 3 Report for the Installation-Wide ERA, LHAAP, Karnack, Texas, 2006, *Final*.

NVA No value available

Table 8-17
Concentrations of Concern for Potential Adverse Amphibian Effects From Exposure to Surface Water Runoff

Wet Weather COPEC [a]	Concentration of Concern for Potential Adverse Amphibian Effects [b] (mg/L)	Number of Effect Levels From ECOTOX Data Base Search [c]	Compounds Included in EcoTox Data Base Search Results	Comment
Aluminum	0.64	25	aluminum chloride	
Beryllium	12	24	beryllium sulfate	
Cadmium	1.0	80	cadmium, cadmium chloride, cadmium nitrate, cadmium sulfate	
Chloride	0.54	169	aluminum chloride, ammonium chloride, cadmium chloride, cobalt chloride, copper chloride, lanthanum chloride, lead chloride, manganese chloride, nickel chloride, potassium chloride, sodium chloride, zinc chloride	metal complexed with chloride may be responsible for toxicity, not chloride itself
Chromium	0.86	10	chromium, chromium oxide	Cr^{VI} from Cr oxide may not be present in samples collected from the Installation
Copper	0.20	49	copper, copper salts	
Iron	25	6	iron methanoarsenate, iron salts	arsenic complexed with iron may be responsible for toxicity, not iron itself.
Lead	2.4	16	lead, lead nitrate, lead salts	
Manganese	9.8	10	manganese, manganese sulfate, manganese chloride	
Mercury	0.061	62	mercury, mercuric chloride, acetao-o-phenylmercury	
Nickel	0.089	17	nickel, nickel chloride, nickel salts	
Nitrate	0.19	16	cadmium nitrate, cobalt nitrate, zinc nitrate	metal complexed with nitrate may be responsible for toxicity, not nitrate itself
Sulfate	3.1	50	ammonium sulfate, beryllium sulfate, cadmium sulfate, manganese sulfate	metal complexed with sulfate may be responsible for toxicity, not sulfate itself

Notes:

[a] See Tables 8-13 through 8-16.

[b] Geometric average of effect concentrations available from the USEPA ECOTOX data base (http://www.epa.gov/ecotox) for typical amphibian test species, including the following genera: *Ambystoma* (salamanders); *Xenopus* and *Bufo* (toads); and *Rana* and *Hyla* (frogs). Effect endpoints included growth, reproduction, population, and survival.

[c] This represents the number of effect concentrations utilized in developing the potential effect concentration, based on the search criteria in footnote "b."

Table 8-18
Wet Weather Surface Water COPECs and Potential Effects on Amphibians
Harrison Bayou

Wet Weather COPEC (mg/L) [1]	Samples Collected >500' from Stream or Wetland/Marsh Boundary [2]						Concentration of Potential Concern for Adverse Amphibian Effects [3]	Maximum Wet Weather Concentration Greater than Concentration of Concern?	Mean Wet Weather Concentration Greater than Concentration of Concern?
	Total	Detects	FOD	Min Detect	Mean Concentration	Max Detect			
Aluminum	6	6	100%	4.8E-01	1.5E+01	8.3E+01	6.4E-01	Yes	Yes
Chloride	14	12	86%	2.0E+00	3.9E+01	3.1E+02	5.4E-01	Yes	Yes
Chromium	31	10	32%	1.1E-02	1.8E-02	1.6E-01	8.6E-01	No	No
Iron	6	6	100%	5.6E-01	2.2E+01	1.2E+02	2.5E+01	Yes	No
Lead	31	26	84%	3.2E-03	2.5E-02	1.1E-01	2.4E+00	No	No
Manganese	6	6	100%	9.4E-02	9.5E-01	3.1E+00	9.8E+00	No	No
Mercury	31	4	13%	2.0E-04	4.1E-04	2.0E-03	6.1E-02	No	No
Nickel	31	5	16%	4.1E-02	3.0E-02	1.2E-01	8.9E-02	Yes	No

Notes:
1 See Table 8-13 for Wet Weather COPEC determination.
2 Detected surface water samples not used in Step 3 ERA because they were associated with wet weather events.
3 From USEPA EcoTox data base, see Table 8-17 and text for discussion.

Table 8-19
Wet Weather Surface Water COPECs and Potential Effects on Amphibians
Goose Prairie Creek

Wet Weather COPEC (mg/L) [1]	Samples Collected >500' from Stream or Wetland/Marsh Boundary [2]						Concentration of Potential Concern for Adverse Amphibian Effects [3]	Maximum Wet Weather Concentration Greater than Concentration of Concern?	Mean Wet Weather Concentration Greater than Concentration of Concern?
	Total	Detects	FOD	Min Detect	Mean Concentration	Max Detect			
Aluminum	10	10	100%	4.8E-01	2.3E+01	2.1E+02	6.4E-01	Yes	Yes
Beryllium	10	1	10%		1.4E-03	1.2E-02	1.2E+01	No	No
Chromium	29	3	10%	6.0E-02	2.1E-02	2.3E-01	8.6E-01	No	No
Copper	14	5	36%	9.0E-03	2.2E-02	1.1E-01	2.0E-01	No	No
Iron	10	10	100%	8.3E-01	2.4E+01	2.2E+02	2.5E+01	Yes	No
Lead	29	21	72%	2.6E-03	3.0E-02	2.9E-01	2.4E+00	No	No
Manganese	10	10	100%	3.5E-02	1.5E+00	1.2E+01	9.8E+00	Yes	No
Nitrate	15	9	60%	2.0E-02	7.5E-01	5.5E+00	1.9E-01	Yes	Yes

Notes:

See Table 8-14 for Wet Weather COPEC determination.

Detected surface water samples not used in Step 3 ERA because they were associated with wet weather events.

From USEPA EcoTox data base, see Table 8-17 and text for discussion.

Table 8-20
Wet Weather Surface Water COPECs and Potential Effects on Amphibians
Central Creek

Wet Weather COPEC (mg/L) [1]	Samples Collected >500' from Stream or Wetland/Marsh Boundary [2]						Concentration of Potential Concern for Adverse Amphibian Effects [3]	Maximum Wet Weather Concentration Greater than Concentration of Concern?	Mean Wet Weather Concentration Greater than Concentration of Concern?
	Total	Detects	FOD	Min Detect	Mean Concentration	Max Detect			
Nitrate / Nitrite	2	2	100%	1.6E-01	1.8E-01	2.1E-01	1.9E-01	Yes	No

Notes:
See Table 8-15 for Wet Weather COPEC determination.
Detected surface water samples not used in Step 3 ERA because they were associated with wet weather events.
From USEPA EcoTox data base, see Table 8-17 and text for discussion.

Table 8-21
Wet Weather Surface Water COPECs and Potential Effects on Amphibians
Saunders Branch

Wet Weather COPEC (mg/L) [1]	Samples Collected >500' from Stream or Wetland/Marsh Boundary [2]						Concentration of Potential Concern for Adverse Amphibian Effects [3]	Maximum Wet Weather Concentration Greater than Concentration of Concern?	Mean Wet Weather Concentration Greater than Concentration of Concern?
	Total	Detects	FOD	Min Detect	Mean Concentration	Max Detect			
Chromium	5	2	40%	1.0E-02	2.4E-02	7.5E-02	8.6E-01	No	No
Lead	5	4	80%	3.0E-03	1.8E-02	5.8E-02	2.4E+00	No	No
Nitrate	4	1	25%		1.1E-01	3.0E-01	1.9E-01	Yes	No

Notes:

See Table 8-16 for Wet Weather COPEC determination.

Detected surface water samples not used in Step 3 ERA because they were associated with wet weather events.

From USEPA EcoTox data base, see Table 8-17 and text for discussion.

Table 8-22
Analysis of Cumulative Effects Across Media

COPEC	Total EEQ	Medium-Specific EEQ			Potentially not evaluated as a COPEC due to all medium-specific EEQs > 1?
		From Soil	From Sediment	From Surface Water	
Industrial Sub-Area/Goose Prairie Creek					
Raccoon					
2,3,7,8-TCDD TEQ	5.51E+00	1.59E+00	2.61E-01	3.66E+00	No
Aluminum	2.06E+02	1.28E+01	1.93E+02	1.01E-01	No
Thallium	1.26E+01	NA	3.44E+00	9.18E+00	No
Bank Swallow					
Aluminum	1.82E+01	3.75E-02	1.82E+01	4.58E-03	No
Lead	2.02E+00	1.10E-01	1.91E+00	1.65E-03	No
Belted Kingfisher					
2,3,7,8-TCDD TEQ	1.28E+01	NA	4.34E-02	1.28E+01	No
Aluminum	8.05E+00	NA	8.04E+00	1.21E-02	No
Thallium	9.62E+00	NA	1.72E-01	9.45E+00	No
Industrial Sub-Area/Central Creek					
Raccoon					
Aluminum	1.95E+02	1.28E+01	1.82E+02	2.95E-01	No
Bank Swallow					
Aluminum	1.72E+01	3.75E-02	1.71E+01	1.34E-02	No
Belted Kingfisher					
2,3,7,8-TCDD TEQ	1.84E+01	NA	2.47E-01	1.81E+01	No
Aluminum	7.60E+00	NA	7.57E+00	3.53E-02	No
Low Impact Sub-Area/Goose Prairie Creek					
Raccoon					
2,3,7,8-TCDD TEQ	4.59E+00	6.71E-01	2.61E-01	3.66E+00	No
Aluminum	1.93E+02	NA	1.93E+02	1.01E-01	No
Bank Swallow					
Aluminum	1.82E+01	NA	1.82E+01	4.58E-03	No
Lead	1.96E+00	4.62E-02	1.91E+00	1.65E-03	No
Zinc	2.20E+00	1.06E-01	2.09E+00	1.45E-03	No
Belted Kingfisher					
2,3,7,8-TCDD TEQ	1.28E+01	NA	4.34E-02	1.28E+01	No
Aluminum	8.05E+00	NA	8.04E+00	1.21E-02	No
Thallium	9.62E+00	NA	1.72E-01	9.45E+00	No
Zinc	4.60E+00	NA	8.99E-01	3.71E+00	No
Low Impact Sub-Area/Central Creek					
Raccoon					
2,3,7,8-TCDD TEQ	7.36E+00	6.71E-01	1.48E+00	5.20E+00	No
Aluminum	1.82E+02	NA	1.82E+02	2.95E-01	No
Bank Swallow					
Aluminum	1.71E+01	NA	1.71E+01	1.34E-02	No
Belted Kingfisher					
2,3,7,8-TCDD TEQ	1.84E+01	NA	2.47E-01	1.81E+01	No
Aluminum	7.60E+00	NA	7.57E+00	3.53E-02	No
Low Impact Sub-Area/Harrison Bayou					
Raccoon					
2,3,7,8-TCDD TEQ	7.06E+00	6.71E-01	2.36E+00	4.03E+00	No
Aluminum	1.94E+02	NA	1.93E+02	9.81E-01	No
Vanadium	1.04E+00	2.30E-01	NA	8.13E-01	YES
Bank Swallow					
Aluminum	1.82E+01	NA	1.82E+01	4.44E-02	No

Table 8-22
Analysis of Cumulative Effects Across Media

COPEC	Total EEQ	Medium-Specific EEQ			Potentially not evaluated as a COPEC due to all medium-specific EEQs > 1?
		From Soil	From Sediment	From Surface Water	
Belted Kingfisher					
2,3,7,8-TCDD TEQ	1.44E+01	NA	3.93E-01	1.40E+01	No
Aluminum	8.15E+00	NA	8.03E+00	1.17E-01	No
Thallium	4.34E+00	NA	1.47E-01	4.20E+00	No
Low Impact Sub-Area/Saunders Branch					
Raccoon					
2,3,7,8-TCDD TEQ	1.84E+00	6.71E-01	1.17E+00	NA	No
Vanadium	2.89E+00	2.30E-01	2.66E+00	NA	No
Bank Swallow					
Zinc	1.25E+00	1.06E-01	1.14E+00	NA	No
Belted Kingfisher					
None					
Waste Sub-Area/Central Creek					
Raccoon					
Aluminum	1.98E+02	1.56E+01	1.82E+02	2.95E-01	No
Barium	7.15E+00	6.21E+00	9.40E-01	NA	No
Bank Swallow					
2,3,7,8-TCDD TEQ	1.14E+00	5.50E-01	5.91E-01	2.09E-04	YES
Aluminum	1.72E+01	4.59E-02	1.71E+01	1.34E-02	No
Barium	1.27E+00	3.67E-02	1.23E+00	NA	No
Belted Kingfisher					
2,3,7,8-TCDD TEQ	1.84E+01	NA	2.47E-01	1.81E+01	No
Aluminum	7.60E+00	NA	7.57E+00	3.53E-02	No
Waste Sub-Area/Harrison Bayou					
Raccoon					
Aluminum	2.10E+02	1.56E+01	1.93E+02	9.81E-01	No
Vanadium	1.14E+00	3.22E-01	NA	8.13E-01	YES
Bank Swallow					
2,3,7,8-TCDD TEQ	1.49E+00	5.50E-01	9.41E-01	1.62E-04	YES
Aluminum	1.83E+01	4.59E-02	1.82E+01	4.44E-02	No
Barium	2.71E+00	3.67E-02	2.67E+00	NA	No
Belted Kingfisher					
2,3,7,8-TCDD TEQ	1.44E+01	NA	3.93E-01	1.40E+01	No
Aluminum	8.15E+00	NA	8.03E+00	1.17E-01	No
Thallium	4.34E+00	NA	1.47E-01	4.20E+00	No

Notes:

(1) Only Raccoon, Bank Swallow, and Belted Kingfisher receptors presented, as only these three receptors are exposed to multiple media to a significant extent.

(2) Only chemicals with individual media EEQs <1 and total EEQ >1 are shown.

EEQ ecological effects quotient

NA Chemical was either not a COPEC in that medium, or receptor is not exposed to the medium (e.g., belted kingfisher is not exposed to soil in the food chain model).

TEQ toxic equivalence

Table 8-23
Summary of Uncertainties for the LHAAP Step 3 Ecological Risk Evaluation

Component	Bias	Magnitude	Ways to Minimize Uncertainty	Additional Comments
Representativeness of data and inclusion of multiple datasets	Overestimates Risk	Medium to High	Separate out data sets and analyze independently	Would be costly to run independent analyses. Conclusions may not be clear. Stakeholders agreed that all available data would be used, and organizational scheme was appropriate.
Use of representative receptor species for site ecological community	Underestimates Risk	Low	Select additional receptor species, such as the rabbit.	Unlikely to change conclusions.
Protectiveness of benchmarks and selection of COPECs	Underestimates Risk	Low	Select lower COPEC benchmarks.	Benchmarks that were used generally represented the best available data at the time.
Use of data with detection limits higher than ecological benchmarks	Overestimates Risk	Low	Eliminate data with detection limits greater than ecological benchmarks.	Unlikely to change conclusions.
Use of 95 % UCLs as exposure point concentrations	Underestimates or Overestimates Risk	Low to Medium	Adjust exposure areas to match individual receptors home ranges, and then calculate new exposure concentrations for each exposure area.	Would be costly to match the exposure area for which the 95% UCL is calculated with each measurement receptor's home range.
Use of one-half reporting limit as concentration for non-detected chemicals	Overestimates Risk	Medium (High for dioxins)	Use MDLs, which are often ten-times lower than reporting limits.	MDL information not available for most historical data.
Assumption that COPECs are 100% bioavailable	Overestimates Risk	Medium to High	Obtain medium- and COPEC-specific bioavailability factors	Would be costly to obtain certain types of bioavailability factors.
Elimination of infrequently detected chemicals	Underestimates Risk	Low	Include infrequently detected chemicals in ERA	Semi-quantitative evaluation determined this issue is of minor concern.
Estimation of risk for small-range receptors because of the use of 95% UCLs	Underestimates Risk	Low	Perform site-specific ERAs	Semi-quantitative evaluation determined this issue is of minor concern.
Discounting of dermal and inhalation exposure routes	Underestimates Risk	Low	Include dermal and inhalation routes of exposure	Would be difficult to quantify these routes of exposure. Volatiles are not significant at this site.
Use of partitioning factors to estimate COPEC concentrations in plants, invertebrates, and prey items (other than rodents).	Overestimates Risk	Medium to High	Measure COPEC concentrations in site plants, invertebrates, and other prey species (other than rodents).	Would be costly to implement, but could significantly reduce EEQs. COPECs measured in plants and invertebrates in BERA.
Use of uncertainty factors to convert LOAEL and LD_{50} toxicity data to NOAELs	Overestimates Risk	Medium	Obtain COPEC-specific NOAEL data	Would be costly to implement, unless data available in the literature.
Use of uncertainty factors to convert NOAEL-TRVs to LOAEL-TRVs	Underestimates or Overestimates Risk	Low	Obtain COPEC-specific LOAEL data.	Would be costly to implement, unless data available in the literature.
Use of most conservative 2,3,7,8-TCDD TEFs	Overestimates Risk	Low to Medium	Use class-specific TEFs for mammals, birds, and fish.	A semi-quantitative evaluation of the issue was completed in Section 8.
Use of surrogate constituents to estimate toxicity for those COPECs without available toxicity data	Underestimates or Overestimates Risk	Low to Medium	Obtain COPEC-specific toxicity data	Would be very costly to obtain COPEC-specific toxicity data, unless available in the literature.
Use of AUFs for wide-range receptors exposed to multiple Installation sub-areas and/or watersheds	Underestimates Risk	Low	Eliminate AUFs, or create exposure area equal to each measurement receptor's home range.	A semi-quantitative evaluation of the issue was completed in Section 8, and this issue was found to be minor.

Table 8-23
Summary of Uncertainties for the LHAAP Step 3 Ecological Risk Evaluation

Component	Bias	Magnitude	Ways to Minimize Uncertainty	Additional Comments
Potential effects of chemical exposure to reptiles and amphibians not quantified in ERA	Underestimates Risk	Low	Obtain COPEC-specific toxicity data for reptiles and amphibians	A semi-quantitative evaluation of the issue was completed in Section 8, and this issue was found to be minor.
Amphibian exposure to wet weather COPEC concentrations not quantified in ERA	Underestimates Risk	Low	Quantify amphibian hazards from exposure to COPECs in wet weather samples	A semi-quantitative evaluation of the issue was completed in Section 8, and this issue was found to be minor.
Cumulative hazards for receptors across multiple media not considered in selection of final COPECs	Underestimates Risk	Low	Reevaluate selection of final COPECs	A semi-quantitative evaluation of the issue was completed in Section 8, and this issue was found to be minor.
Consideration of surface water and sediment data gap samples in a separate assessment	Underestimates or Overestimates Risk	Low	Merge data into Step 3 ERA data base and rerun all assessments.	A semi-quantitative evaluation of the data gap samples was completed in Section 8.
Use of hazard quotient method to estimate risks to populations or communities may be biased	Overestimates Risk	High	Perform population or community studies, or other field techniques such as rodent sperm analysis (RSA).	Would be very costly to perform population or community studies. RSA is considered in the BERA.

Notes:

AUF	area use factor	MDL	method detection limit
COPEC	constituent of potential ecological concern	NOAEL	no observable adverse effect limit
EEQ	ecological effects quotient	TEF	toxic equivalency factor
LD_{50}	lethal dose 50 percent	TRV	toxicity reference value
LOAEL	lowest observable adverse effect level	UCL	upper confidence limit

9.0 Refined Exposure Pathways and Receptors

The potentially complete exposure pathways, identified in the Step 1 and 2 ERAs and the preliminary identification of exposure pathways and receptors performed early in Step 3 (see **Section 4.0**) can be refined in more detail on the basis of the fate and transport evaluations and evaluation of potential ecological receptors (see **Section 7.0**).

Because quantitative fate and transport evaluation (except as noted below for surface water) may occur as part of the FS, which is not scheduled for completion until after Step 3 is performed, little information is currently available regarding the fate and transport of chemicals in one medium or source area to another. However, a limited number of chemicals that were selected on the basis of prior site investigations were modeled for concentrations in surface water from groundwater and soil sources (**Section 4.3.1.2**). The results of the surface water modeling indicated that concentrations of these selected chemicals leaching from soil or transported to streams from groundwater are not a concern for ecological receptors (**Table 4-7**).

Several biological processes also affect constituent fate and transport in the environment:

- Bioaccumulation
- Bioconcentration
- Biodegradation
- Biological transformation
- Food chain transfer
- Excretion

Many of these processes were accounted for in the food chain models that were performed to estimate measurement receptor doses of chemicals selected as preliminary COPECs (**Section 7.2**). For example, bioaccumulation/bioconcentration processes were accounted by using the uptake factors to calculate estimated concentrations in prey items given a COPEC concentration in soil, surface water, or sediment.

Although the complexity and conservatism inherent in the food chain models prohibit the complete elimination of an exposure pathway, it may be assumed that exposure pathways for particular receptors for a particular sub-area/watershed combination that have EEQs less than 1 associated with them are not problematic and do not need to be further evaluated. It was assumed that transport of chemicals to a measurement receptor was ecologically insignificant if all EEQs were below 1. These findings are summarized as follows:

Industrial Sub-Area/Goose Prairie Creek Watershed

- Transport of chemicals from abiotic media to the Red-Tailed Hawk is considered ecologically insignificant because all EEQs were equal to or below 1 when rounded

Industrial Sub-Area/Central Creek Watershed

- Transport of chemicals from abiotic media to the Red-Tailed Hawk is considered ecologically insignificant because all EEQs were equal to or below 1 when rounded

Low Impact Sub-Area/Goose Prairie Creek Watershed

- Transport of chemicals from abiotic media to the Red Fox is considered ecologically insignificant because all EEQs were equal to or below 1 when rounded
- Transport of chemicals from abiotic media to the Red-Tailed Hawk is considered ecologically insignificant because all EEQs were equal to or below 1 when rounded

Low Impact Sub-Area/Central Creek Watershed

- Transport of chemicals from abiotic media to the Red Fox is considered ecologically insignificant because all EEQs were equal to or below 1 when rounded
- Transport of chemicals from abiotic media to the Red-Tailed Hawk is considered ecologically insignificant because all EEQs were equal to or below 1 when rounded

Low Impact Sub-Area/Harrison Bayou Watershed

- Transport of chemicals from abiotic media to the Red Fox is considered ecologically insignificant because all EEQs were equal to or below 1 when rounded
- Transport of chemicals from abiotic media to the Red-Tailed Hawk is considered ecologically insignificant because all EEQs were equal to or below 1 when rounded

Low Impact Sub-Area/Saunders Branch Watershed

- Transport of chemicals from abiotic media to the Red Fox is considered ecologically insignificant because all EEQs were equal to or below 1 when rounded
- Transport of chemicals from abiotic media to the Red-Tailed Hawk is considered ecologically insignificant because all EEQs were equal to or below 1 when rounded

Waste Sub-Area/Central Creek Watershed

- No exposure pathways/routes could be eliminated for any receptor

Waste Sub-Area/Harrison Bayou Watershed

- No exposure pathways/routes could be eliminated for any receptor

10.0 Refined List of COPECs

This section presents a detailed discussion of the LHAAP COPECs in soil, sediment, and surface water that were estimated to have an EEQ above 1.0 based on the wildlife food chain model for the twelve quantified measurement receptors (the Deer Mouse, Raccoon, Raccoon (Louisiana Black Bear), Short-Tailed Shrew, Red Fox, Muskrat, River Otter, Townsend's Big-Eared Bat, Bank Swallow, American Woodcock, Belted Kingfisher, and Red-Tailed Hawk). Results of the direct contact assessment for soil, sediment, and surface water (**Section 7.1**) are also presented and discussed, as well as aquatic COPECs estimated to have fish tissue concentrations above CBRs (i.e., HQs above 1.0) based on measured fish tissue data (**Section 8.0**). The objective of this section is to refine the list of COPECs to those that are most likely to be elevated with respect to background and have a reasonable probability of adversely affecting ecological receptors and, therefore, require some sort of further action, such as risk management, remedial action, additional ecological study, and/or continued monitoring. A weight-of-evidence approach is used for each COPEC, taking into consideration factors such as:

- Is the COPEC background related (generally giving the greatest weight to the background geochemical evaluation results, when available)? (also, see further discussion in the paragraph following the bullets)
- Are there alternative and/or more appropriate/realistic BAFs or TRVs available that would result in the maximum EEQs or HQs dropping to 1 or below?
- Does a spatial evaluation show elevated soil COPEC detections are isolated and not suggestive of a contaminated source area, or does a spatial evaluation show elevated sediment COPEC detections are isolated and not suggestive of a major residual deposition area?
- Was the COPEC detected infrequently?
- Does a spatial evaluation show elevated surface water COPEC detections are not co-located with elevated detections in sediment? (note: this weight-of-evidence is given less priority than others.)
- Is it unlikely that the COPEC is associated with CERCLA-related releases at LHAAP? For example, is the COPEC a pesticide that may be present as a result of the assumed lawful application of pesticides, as discussed in *Spill Prevention and Control* (Chapter 327.1 of the TAC, 1999)?
- Are there other site-specific or chemical-specific factors that suggest the COPEC should be eliminated from further investigation?

If one or more of these weight-of-evidence factors can be answered in the affirmative, then a recommendation is made to eliminate the COPEC from the final list of COPECs. As discussed previously (e.g., **Section 7.3**), it is noted that chemicals determined to be background-related are not eliminated entirely. Rather, they are retained in a list and carried forward to the Risk Characterization step (Step 7 of the 8-Step Process) for consideration by risk managers. However, because they are considered naturally occurring and/or environmentally ubiquitous, they are not included as final COPECs, and are not candidates for additional ecological characterization or investigation in the BERA.

It should be noted that in the discussion of spatial data, the term "elevated detections" can refer to different quantiles of the detected concentrations, depending on the particular COPEC and sub-area or watershed. Only detected concentrations greater than the higher of the A) available background screening value (i.e., the lower of the UPL and UTL values) and B) ecological benchmark (for non-bioaccumulative chemicals only) were plotted (**Appendix H**).

Occasionally, the percent contribution of a chemical in a particular medium to the overall EEQ associated with that chemical from all media will be described in the chemical write-ups in this section. For example, if the barium EEQ for an organism is 10, but 95 percent of the hazard comes from exposure to sediment rather than soil, it may be stated in the discussion of barium in soil that only 5 percent of the EEQ comes from soil exposure. It should be noted that this refers to <u>all</u> exposure pathways (e.g., direct ingestion of soil, dietary exposure through prey items, etc.) associated with the soil medium, and not just direct contact pathways.

The value of the geochemical evaluation, and its preferred use when it conflicts with statistical results, lies in its emphasis on geochemical explanations for elevated trace element concentrations. Statistical tests, while useful as a screening tool, are inadequate for explaining high trace element concentrations. Statistical tests can determine that a concentration is elevated, but these tests cannot tell us why. For this reason, if statistical comparisons to background conflict with geochemical evaluations, geochemistry results are generally deemed more appropriate to use in deciding whether or not a COPEC is background related. However, an exception to this preference of geochemistry results over statistical results may be made in some instances. For example, geochemical analysis may indicate that a medium has a degree of contamination in it, but if the concentrations of the contamination are below typical background concentrations there is less concern of potential adverse effects, as organisms would experience those concentrations (or higher) in their ambient environment. It should also be noted that during the discussions of the results of the background geochemical analyses, "non-target analyte list (TAL) samples" are those samples that did not have the reference elements needed to perform a geochemical analysis, and therefore, no definitive geochemical conclusions regarding these samples could be made, except to compare the concentrations with available background screening concentrations.

Discussions are presented by environmental media (soil, sediment, and surface water in **Sections 10.1**, **10.2**, and **10.3**, respectively), then by COPECs ranked alphabetically (inorganic chemicals first, followed by organic chemicals), and finally by site area. **Section 10.4** presents a summary of the chemicals identified as background related. **Section 10.5** presents a summary of the final list of COPECs, for each media, and each sub-area and watershed, with **Table 10-1** presenting an overall summary of the final COPECs in all three media, and **Tables 10-2, 10-3**, and **10-4** summarizing the details of COPEC selection in soil, sediment, and surface water, respectively.

10.1 Soil

This section presents a discussion of soil COPECs, as defined at the beginning of this section. To identify EEQs in soil, results for the obligate terrestrial receptors (Deer Mouse, Short-Tailed Shrew, Red Fox, Townsend's Big-Eared Bat, and American Woodcock) and facultative terrestrial receptors (Red-Tailed Hawk) are used (**Tables 7-26** through **7-33**). Results for the Raccoon and Raccoon (Louisiana Black Bear), facultative terrestrial and aquatic species, are also considered.

10.1.1 Aluminum

This section summarizes all of the lines of evidence for aluminum in soil presented in the Step 3 evaluation, and provides a recommendation as to whether the chemical should be carried forward to the BERA as a final COPEC. It should be noted that aluminum is known to be process related (**Section 1.3.10**).

10.1.1.1 Industrial Sub-Area

Aluminum was not selected as a final COPEC based on findings presented below; however, it is retained on the background list for consideration by risk managers in Step 7.

The maximum aluminum EEQ for terrestrial receptors for this sub-area was 132 for the Short-Tailed Shrew, based on the NOAEL Tier 1 approach. This EEQ dropped to 87 for the NOAEL Tier 2 approach. The maximum Raccoon EEQ was 206, but the majority of the hazard (94 percent) was from sediment exposure (i.e., the ingestion of benthic invertebrates). Other terrestrial receptors had the following maximum EEQs: Deer Mouse (29); Red Fox (6.6); American Woodcock (1.9); and Red-Tailed Hawk less than 1.0.

Aluminum concentrations in soil were suggestive of potential toxicity to plants (**Section 7.1.1.1**). However, the background UTL and UPL values of 23,800 and 18,900 mg/kg were above the plant toxicity screening value of 50 mg/kg, suggesting this screening value is inappropriate for the LHAAP area.

Results of the ecological background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that aluminum concentrations measured in Industrial Sub-Area soils were consistent with background.

Results of the UTL and UPL comparisons, and the WRS test, showed that aluminum was potentially elevated with respect to background, however, given the number of soil samples collected at this sub-area compared with the background data set (540 vs. 56 samples), this finding is not unexpected. As the site data set is much larger than the background data set, the identification, by chance alone, of detecting higher concentrations in the site samples than in background samples, is quite likely. The box and whisker plot shows that the sub-area median was above the background median concentration, but not above the background 75th percentile concentration. In addition, the 75th percentile concentrations were very similar between the sub-area and background data sets. It should also be noted that although the maximum detected aluminum concentration of 40,400 mg/kg at this sub-area is above the median background concentration of 30,000 mg/kg in Texas soils (TNRCC, 2001), the 95 percent UCL sub-area concentration of 9,540 mg/kg is well below this regional background screening level.

Measurements of pH in soil ranged from 4.5 to 7.9 and averaged 5.3. According to USEPA (2005), aluminum is not bioavailable at soil pH values equal to or above 5.5, and 74 of the 123 available soil samples measured for pH at this sub-area (60 percent) had a pH equal to or greater than 5.5.

In conclusion, aluminum is not considered a final COPEC for the Industrial Sub-Area because:

- Geochemical results indicate the concentrations are consistent with background.
- In general, the soils are not sufficiently acidic, thereby reducing the bioavailability of this inorganic chemical.

Aluminum is retained on the background list for consideration by risk managers in Step 7.

10.1.1.2 Waste Sub-Area

Aluminum was not selected as a final COPEC based on findings presented below; however, it is retained on the background list for consideration by risk managers in Step 7.

The maximum aluminum EEQ for terrestrial receptors for this sub-area was 129 for the Short-Tailed Shrew, based on the NOAEL Tier 1 approach. This EEQ dropped to 78 for the NOAEL Tier 2 approach. The maximum Raccoon EEQ was 198 and the maximum Raccoon (Louisiana Black Bear) EEQ was 25.9, but the majority of the hazard was from sediment exposure (i.e., the ingestion of benthic invertebrates).

Aluminum concentrations in soil were suggestive of potential toxicity to plants (**Section 7.1.1.3**). However, the background UTL and UPL values of 23,800 and 18,900 mg/kg were above the plant toxicity screening value of 50 mg/kg, suggesting this screening value is inappropriate for the LHAAP area.

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that aluminum concentrations measured in Waste Sub-Area soils were consistent with background.

Results of the UTL comparison showed that aluminum was not elevated with respect to background; results of the UPL comparison showed that aluminum was potentially elevated with respect to background, and results of the WRS test showed that aluminum was not elevated with respect to background. The number of aluminum soil samples collected at this sub-area was lower than those from the background data set (26 vs. 56 samples). The box and whisker plot shows that that the sub-area median was above the background median concentration, but not above the background 75th percentile concentration. In addition, the 75th percentile concentration for the sub-area is below the 75th percentile for background data set. It should also be noted that the maximum detected aluminum concentration of 21,500 mg/kg, and the 95 percent UCL concentration of 9,300 mg/kg, are both below the median background concentration of 30,000 mg/kg in Texas soils (TNRCC, 2001).

Measurements of pH in soil ranged from 3.5 to 8.6 and averaged 4.8. According to USEPA (2005), aluminum is not bioavailable at soil pH values equal to or above 5.5, and 34 of the 51 available soil samples measured for pH at this sub-area (67 percent) had a pH equal to or greater than 5.5.

In conclusion, aluminum is not considered a final COPEC for the Waste Sub-Area because:

- Geochemical results indicate the concentrations are consistent with background.
- Comparisons to the background UTL and the WRS test results indicate that concentrations are background related.
- In general, the soils are not sufficiently acidic, thereby reducing the bioavailability of this inorganic chemical.

Aluminum is retained on the background list for consideration by risk managers in Step 7.

10.1.1.3 Low Impact Sub-Area

Aluminum was not selected as a COPEC in soil for this sub-area.

10.1.2 Antimony

This section summarizes all of the lines of evidence for antimony in soil presented in the Step 3 evaluation, and provides a recommendation as to whether the chemical should be carried forward to the BERA as a final COPEC. It should be noted that antimony is known to be process related (**Section 1.3.10**).

10.1.2.1 Industrial Sub-Area

Antimony was not selected as a final COPEC based on findings presented below.

The maximum antimony EEQ for terrestrial receptors for this sub-area was 2.3 for the Short-Tailed Shrew, based on the NOAEL Tier 1 approach. This EEQ dropped to 0.8 for the NOAEL Tier 2 approach. All other terrestrial receptors had maximum EEQs that were less than 1.0, except for the Deer Mouse that had a maximum EEQ of 1.2. The maximum Raccoon EEQ was also less than 1.0.

The evaluation of direct toxicity to plants and earthworms resulted in Tier 1 and Tier 2 EEQs that were below 1 (**Section 7.1.1.1**).

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that antimony concentrations measured in 27 samples collected from Industrial Sub-Area soils were geochemical outliers and may contain a component of contamination, while other samples were found to be consistent with background.

Results of the UTL and UPL comparisons showed that antimony was potentially elevated with respect to background; however, given the number of antimony soil samples collected at this sub-area compared with the background data set (570 vs. 56 samples), this finding is not unexpected. As the site data set is much larger than the background data set, the identification by chance alone of naturally-occurring elevated inorganic concentrations, is quite likely. The WRS test could not be run as the number of nondetect samples was greater than 50 percent. The box and whisker plot shows that the median is below the background concentration and the 75th percentile concentrations are the same. The maximum detected antimony concentration was 16.2 mg/kg and the 95 percent UCL concentration was 2.1 mg/kg at this sub-area. These values are above the median background concentration of 1 mg/kg in Texas soils from TNRCC (2001).

The majority of the estimated Short-Tailed Shrew EEQ was from the ingestion of terrestrial invertebrates (90 percent), and the rest was from the ingestion of soil. The soil-to-invertebrate BCF value of 1.14 that was used for the Tier 1 approach was based on the geometric mean of BCFs available for other inorganics (as no BCF was available for antimony; **Table 7-21**). This BCF value of 1.14 is believed to considerably overestimate uptake, as antimony is not a known bioaccumulator (**Appendix A**). As the average BCF of the eight inorganics not known to be bioaccumulators (aluminum, arsenic, barium, cobalt, iron, manganese, strontium, and vanadium) is 0.2, based on the 90th percentile BCF values (**Table 7-21**), it is likely the EEQ has been overestimated by a factor of approximately 6. Use of this alternative BCF value would thus reduce the maximum estimated EEQ from 2.3 to less than 1.

A spatial evaluation shows that six discrete areas had two to three samples with elevated antimony concentrations (greater than 1.65 mg/kg) located close together (**Appendix H**). This finding suggests the presence of some minor localized area of elevated antimony concentrations in soil.

In conclusion, antimony is not considered a final COPEC for the Industrial Sub-Area because:

- The median Industrial Sub-Area concentration was below the median background concentration and the 75th percentile concentrations were the same.
- Although the maximum EEQ of 2.3 was above 1, almost the entire estimated dose was from the soil-to-invertebrate bioaccumulation pathway, and the conservative BCF value of 1.14 that was used is believed to considerably overestimate uptake, as antimony is not a known bioaccumulator. Use of an alternative BCF value would reduce the maximum NOAEL-based EEQ to less than 1.
- No direct toxicity to either plants or earthworms was predicted.

10.1.2.2 Waste Sub-Area

Antimony not was selected as a final COPEC based on findings presented below.

The maximum antimony EEQ for terrestrial receptors for this sub-area was 1.2 for the Deer Mouse, based on the NOAEL Tier 1 approach. This EEQ dropped to 0.3 for the Tier 2 approach. All other terrestrial receptors had EEQs less than 1. The maximum Raccoon EEQ was also less than 1.

The evaluation of direct toxicity to plants and earthworms resulted in Tier 1 and Tier 2 EEQs that were below 1 (**Section 7.1.1.3**).

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that the antimony concentration measured in one soil sample (LH-S116-02_1) in Waste Sub-Area soils was a geochemical outlier relative to corresponding reference element concentrations. Other sample results in sub-area soils, based on a geochemical analysis, were found to be consistent with background.

Results of the UTL and UPL comparisons test showed that antimony was not potentially elevated with respect to background. The WRS test could not be run as the number of nondetect samples was greater than 50 percent. The box and whisker plot shows that both the median and 75th

percentile concentrations are below the background concentrations for these two statistics. It should also be noted that although the maximum detected antimony concentration of 1.53 mg/kg exceeds the median background concentration of 1 mg/kg in Texas soils (TNRCC, 2001), the 95 percent UCL concentration of 0.8 mg/kg at this sub-area is below it.

The majority of the estimated Deer Mouse EEQ was from the ingestion of terrestrial invertebrates (91 percent), and the rest was from the ingestion of soil. The soil-to-invertebrate BCF value of 1.14 that was used for the Tier 1 approach was based on the geometric mean of BCFs available for other inorganics (as no BCF was available for antimony; **Table 7-21**). This BCF value of 1.14 is believed to considerably overestimate uptake, as antimony is not a known bioaccumulator (**Appendix A**). As the average BCF of the eight inorganics not known to be bioaccumulators (aluminum, arsenic, barium, cobalt, iron, manganese, strontium, and vanadium) is 0.2, based on the 90th percentile BCF values (**Table 7-21**), it is likely the EEQ has been overestimated by a factor of approximately 6. Use of this alternative BCF value would thus reduce the maximum estimated EEQ from 1.2 to less than 1.

A spatial evaluation was not performed because antimony was only detected in three samples collected from the Waste Sub-Area. This finding does not suggest the presence of a localized source of elevated concentrations of antimony in soil.

In conclusion, antimony is not considered a final COPEC for the Waste Sub-Area because:

- The median and 75th percentile Waste Sub-Area concentrations were below the background median and 75th percentile concentrations, the MDC was below the UTL and UPL background statistics, and all but one of the soil samples were shown by the geochemical evaluation to be background related.
- Although the maximum EEQ of 1.2 was above 1, almost the entire estimated dose was from the soil-to-invertebrate bioaccumulation pathway, and the conservative BCF value of 1.14 that was used is believed to considerably overestimate uptake, as antimony is not a known bioaccumulator. Use of an alternative BCF value would reduce the maximum NOAEL-based EEQ to less than 1.
- No direct toxicity to either plants or earthworms was predicted.

10.1.2.3 Low Impact Sub-Area

Antimony was not was selected as a final COPEC for this sub-area because none of the receptors EEQs were estimated to be above 1, and no direct contact toxicity to plants or invertebrates was predicted.

10.1.3 Barium

This section summarizes all of the lines of evidence for barium in soil presented in the Step 3 evaluation, and provides a recommendation as to whether the chemical should be carried forward to the BERA as a final COPEC. It should be noted that barium is known to be process related (**Section 1.3.10**).

10.1.3.1 Industrial Sub-Area

Barium was not selected as a preliminary COPEC in this sub-area (**Table 6-28**).

10.1.3.2 Waste Sub-Area

Barium was selected as a final COPEC based on findings presented below.

The maximum barium EEQ for terrestrial receptors for this sub-area was 10.3 for the Deer Mouse, based on the NOAEL Tier 1 approach. This EEQ dropped to 1.4 for the NOAEL Tier 2 approach. Other terrestrial receptors had the following maximum EEQs: Townsend's Big-Eared Bat (5.1); Short-Tailed Shrew (3.4); American Woodcock (1.6); and Red Fox and Red-Tailed Hawk less than 1.0. The maximum Raccoon EEQ was 8.3 and the maximum Raccoon (Louisiana Black Bear) EEQ was 1.1, and about 75 percent of these hazards were from soil-related exposure (i.e., the ingestion of soil, terrestrial invertebrates, and terrestrial plants).

Barium concentrations in soil were suggestive of potential toxicity to plants (**Section 7.1.1.3**). Background UTL and UPL values of 136 and 116 mg/kg were below the plant toxicity screening value of 500 mg/kg. The Tier 1 plant toxicity EEQ was 1 when rounded to one significant figure, and less than 1 using the Tier 2 average total soil concentration. The Tier 1 soil invertebrate toxicity EEQ was 1.7.

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that barium concentrations measured in two soils samples [17SS22(1-3)-980820 and C-17SS26(1-3)-980820] in Waste Sub-Area soils were geochemical outliers relative to corresponding reference element concentrations. Other sample results in sub-area soils, based on a geochemical analysis, were found to be consistent with background, however, it should be noted that 43 non-TAL soil samples not included in the geochemical analysis are a potential concern because the concentrations exceeded the background screening value.

Results of the UTL and UPL comparisons and the WRS test showed that barium was potentially elevated with respect to background, however, given the number of barium soil samples collected at this sub-area compared with the background data set (103 vs. 56 samples), this finding is not unexpected. As the site data set is much larger than the background data set, the identification by chance alone of naturally-occurring elevated inorganic concentrations is quite likely. The box and whisker plot shows that both the median and 75th percentile concentrations are above the background concentrations for these two statistics. It should also be noted that both the maximum detected barium concentration of 20,500 mg/kg and the 95 percent UCL concentration of 553 mg/kg at this sub-area are above the median background concentration of 300 mg/kg in Texas soils (TNRCC, 2001).

Most of the estimated Deer Mouse EEQ was from the ingestion of terrestrial plants and all of the estimated Townsend's Big-Eared Bat EEQ was from plant (moth) ingestion. The barium soil-to-plant BAF used for the Tier 1 approach was the maximum value of 0.92 from available studies (USEPA, 2005). This maximum value was used because a 90th percentile value was not presented in USEPA (2005), although a 90th percentile value is the preferred value for the Tier 1 approach. The BAF used for the Tier 2 approach was the median value of 0.156 from USEPA (2005). It should be noted that the recommended barium BAF is 0.049 (Figure 30 TAC §350.73[e]) and a value of 0.03 is recommended by IAEA (1994). Use of either the TAC or the IAEA (1994) barium soil-to-plant BCF would reduce the estimated Deer Mouse and Bat Tier 1 EEQs by 20- to 30-fold, reducing the maximum EEQs of 10.3 and 5.1, respectively, to less than 1.0.

The third most impacted terrestrial wildlife species was the Short-Tailed Shrew, with a Tier 1 NOAEL-based EEQ of 3.4 for barium, of which 44 percent was from the direct ingestion of soil. Use of an alternative soil-to-plant BAF would not alter this estimated EEQ, as this receptor does not consume plants.

The small mammal TRV used for the Deer Mouse, Townsend's Big Eared Bat, and the Short-Tailed Shrew was based on a chronic rat study in which the highest dose was defined as the NOAEL, because cardiovascular hypertension was observed in all three experimental doses (Sample et al, 1996). The study noted that the significance of hypertension in wild populations is unclear; therefore, the maximum dose that did not affect growth, food, or water consumption was considered as the chronic NOAEL. This suggests that the NOAEL may be overly conservative and use of a more realistic NOAEL TRV would result in reducing the NOAEL-based EEQs by a considerable, although undefined, amount.

A spatial evaluation shows that five samples with elevated barium concentrations greater than 1,080 mg/kg were located within approximately 500 feet of each other near Site 17 (**Appendix H**). This finding suggests the presence of a localized source of elevated concentrations of barium in soil.

In conclusion, barium is considered a final COPEC for the Waste Sub-Area because:

- The geochemical results indicate that some concentrations are inconsistent with background, and other background statistical tests support the conclusion that barium is not background related. Forty-three non-TAL samples could not be evaluated using the geochemical approach and had concentrations above the background screening value.

- Direct toxicity to soil invertebrates is suggested by the data.
- The Short-Tailed Shrew EEQ was estimated to be above 1 based primarily on the ingestion of terrestrial invertebrates and soil, which is not affected if an alternative soil-to-plant uptake factor is used, as described above.
- Results of a spatial evaluation suggested the presence of a localized contaminated source area.

10.1.3.3 Low Impact Sub-Area

Barium was not selected as a COPEC in soil for this sub-area (**Table 6-3**).

10.1.4 Cadmium

This section summarizes all of the lines of evidence for cadmium in soil presented in the Step 3 evaluation, and provides a recommendation as to whether the chemical should be carried forward to the BERA as a final COPEC. It should be noted that cadmium is not known to be related to any processes at the installation (**Section 1.3.10**).

10.1.4.1 Industrial Sub-Area

Cadmium was selected as a final COPEC based on findings presented below.

The maximum cadmium EEQ for terrestrial receptors for this sub-area was 1.7 for the Short-Tailed Shrew, based on the NOAEL Tier 1 approach. This EEQ dropped to 1.5 for the NOAEL Tier 2 approach. All other terrestrial receptors had maximum EEQs that were less than 1.0. The maximum Raccoon EEQ was also less than 1.0.

The evaluation of direct toxicity to earthworms and plants resulted in Tier 1 and Tier 2 EEQs that were below 1 (**Section 7.1.1.1**).

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that cadmium concentrations measured in four samples collected from Industrial Sub-Area soils were geochemical outliers and may contain a component of contamination, while other samples were found to be consistent with background.

Results of the UTL and UPL comparisons showed that cadmium was potentially elevated with respect to background; however, given the number of cadmium soil samples collected at this sub-area compared with the background data set (654 vs. 56 samples), this finding is not unexpected. As the site data set is much larger than the background data set, the identification by chance alone of naturally-occurring elevated inorganic concentrations, is quite likely. The

WRS test could not be run as the number of nondetect samples was greater than 50 percent. The box and whisker plot shows that both the median and 75th percentile concentrations are above the background concentrations for these two statistics. The maximum detected cadmium concentration was 37.5 mg/kg and the 95 percent UCL concentration was 0.887 mg/kg at this sub-area. These values could not be compared with the median background concentration in Texas soils from TNRCC (2001) because no background value is provided in this publication.

The majority of the estimated Short-Tailed Shrew EEQ was from the ingestion of terrestrial invertebrates (99 percent), and the rest was from the ingestion of soil. The soil-to-invertebrate BCF that was used for the Tier 1 approach was based on a chemical-specific regression equation from Sample et al. (1999) that resulted in a BCF of 17.7.

A spatial evaluation shows that three soil samples with elevated cadmium concentrations (greater than 4.74 mg/kg) were within an area of approximately 300 feet by 300 feet in size near Site 7 (**Appendix H**). This finding suggests the presence of a minor localized area of elevated cadmium concentrations in soil.

In conclusion, cadmium is considered a final COPEC for the Industrial Sub-Area because:

- The maximum NOAEL EEQ was greater than 1.0.
- Cadmium could not definitively be shown to be background related.
- There was a minor localized area of elevated cadmium concentrations in soil.

10.1.4.2 Waste Sub-Area

Cadmium was selected as a final COPEC based on findings presented below.

The maximum cadmium EEQ for terrestrial receptors for this sub-area was 1.45 for the Short-Tailed Shrew, based on the NOAEL Tier 1 approach. This EEQ dropped to 1.3 for the NOAEL Tier 2 approach. All other terrestrial receptors had maximum EEQs that were equal to or less than 1.0. The maximum Raccoon EEQ was also less than 1.0.

The evaluation of direct toxicity to earthworms and plants resulted in Tier 1 and Tier 2 EEQs that were below 1.0 (**Section 7.1.1.3**).

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that cadmium concentrations were consistent with background; however, three non-TAL samples should be considered a potential concern because the concentrations exceeded the background screening concentration.

Results of the UTL and UPL comparisons showed that cadmium was potentially elevated with respect to background, however, given the number of cadmium soil samples collected at this sub-area compared with the background data set (103 vs. 56 samples), this finding is not unexpected. As the site data set is much larger than the background data set, the identification by chance alone of naturally-occurring elevated inorganic concentrations is quite likely. The WRS test could not be run as the number of nondetect samples was greater than 50 percent. The box and whisker plot shows that both the median and 75th percentile concentrations are above the background concentrations for these two statistics. The maximum detected cadmium concentration was 7.33 mg/kg and the 95 percent UCL concentration was 0.667 mg/kg at this sub-area. These values could not be compared with the median background concentration in Texas soils from TNRCC (2005) because no background value was available in this publication.

The majority of the estimated Short-Tailed Shrew EEQ was from the ingestion of terrestrial invertebrates (99 percent), and the rest was from the ingestion of soil. The soil-to-invertebrate BCF that was used for the Tier 1 approach was based on a chemical-specific regression equation from Sample et al. (1999) that resulted in a BCF of 20.

A spatial evaluation shows that four soil samples with elevated cadmium concentrations (greater than 1.49 mg/kg) were within an area of approximately 100 feet by 300 feet in size near Site 17 (**Appendix H**). This finding suggests the presence of a minor localized area of elevated cadmium concentrations in soil.

In conclusion, cadmium was considered a final COPEC for the Waste Sub-Area because:

- The maximum Tier 1 EEQ was above 1 (1.45).
- There was an indication of a localized area of elevated concentrations..

10.1.4.3 Low Impact Sub-Area

Cadmium was not selected as a final COPEC based on findings presented below.

The maximum cadmium EEQ for terrestrial receptors for this sub-area was 1.1 for the Short-Tailed Shrew, based on the NOAEL Tier 1 approach. This EEQ dropped to less than 1.0 for the Tier 2 approach. All other terrestrial receptors had maximum EEQs that were less than 1.0. The maximum Raccoon EEQ was also less than 1.0.

The evaluation of direct toxicity to earthworms and plants resulted in Tier 1 and Tier 2 EEQs that were below 1 (**Section 7.1.1.2**).

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that the cadmium concentration measured in one sample (LAP-81130) collected from Low Impact Sub-Area soils was a geochemical outlier and may contain a component of contamination, while other samples were found to be consistent with background. This sample was collected according to a sampling plan that was biased to locate expected areas of high concentrations, and was collected near a bunker at Site 45. This cadmium concentration was attributed to paint in construction materials (Shaw, 2004e). Demolition of these bunkers has occurred since this sample was collected in 2000.

Results of the UTL and UPL comparisons showed that cadmium was potentially elevated with respect to background. The number of cadmium soil samples collected at this sub-area was greater than that collected for the background data set (144 vs. 56 samples). The WRS test could not be run as the number of nondetect samples was greater than 50 percent. The box and whisker plot shows that both the median and 75th percentile concentrations are below the background concentrations for these two statistics. The maximum detected cadmium concentration was 6.08 mg/kg and the 95 percent UCL concentration was 0.395 mg/kg at this sub-area. These values could not be compared with the median background concentration in Texas soils from TNRCC (2005) because no background value was available in this publication.

The majority of the estimated Short-Tailed Shrew EEQ was from the ingestion of terrestrial invertebrates (99 percent), and the rest was from the ingestion of soil. The soil-to-invertebrate BCF that was used for the Tier 1 approach was based on a chemical-specific regression equation from Sample et al. (1999) that resulted in a BCF of 25.5.

A spatial evaluation shows that only two soil samples had elevated cadmium concentrations greater than or equal to 1.92 mg/kg, and these sample locations are not suggestive of a contaminated source area (**Appendix H**).

In conclusion, cadmium was not considered a final COPEC for the Low Impact Sub-Area because:

- The Short-Tailed Shrew NOAEL-based EEQ was only 1.1 (very close to 1.0).
- All other terrestrial receptors had EEQs that were estimated to be less than 1.0.
- Geochemical results for all but one sample indicate the concentrations are consistent with background.
- The box and whisker plot showed that both the median and 75th percentile concentrations were below the background concentrations for these two statistics.
- No direct contact toxicity to either plants or invertebrates was predicted.
- A contaminated source area is not suggested by results of the spatial evaluation.

10.1.5 Chromium

This section summarizes all of the lines of evidence for chromium in soil presented in the Step 3 evaluation, and provides a recommendation as to whether the chemical should be carried forward to the BERA as a final COPEC. It should be noted that chromium is known to be process related (**Section 1.3.10**).

10.1.5.1 Industrial Sub-Area

Chromium was selected as a final COPEC based on findings presented below.

The maximum chromium EEQ for terrestrial receptors for this sub-area was 7.3 for the American Woodcock, based on the NOAEL Tier 1 approach. This EEQ dropped to 0.9 for the NOAEL Tier 2 approach. The Short-Tailed Shrew had an EEQ of 2.0 and the other terrestrial receptors (Deer Mouse, Red Fox, Townsend's Big-Eared Bat, and Red-Tailed Hawk) had maximum EEQs that were less than 1.0. The maximum Raccoon EEQ was also less than 1.0.

Chromium concentrations in soil were suggestive of potential toxicity to earthworms. However, when the benchmark for trivalent chromium was used (i.e., the more likely form of chromium in site soil) instead of the more toxic hexavalent chromium, the EEQ dropped below 1.0 (**Section 7.1.1.1**). Chromium concentrations in soil, for both trivalent and hexavalent forms, were also suggestive of potential toxicity to plants.

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that chromium concentrations measured in fourteen samples collected from Industrial Sub-Area soils were geochemical outliers and may contain a component of contamination, while other samples were found to be consistent with background. Four non-TAL samples should be considered a potential concern because the concentrations exceeded the background screening value.

Results of the UTL and UPL comparisons, and the WRS test, showed that chromium was potentially elevated with respect to background; however, given the number of chromium soil samples collected at this sub-area compared with the background data set (655 vs. 56 samples), this finding is not unexpected. As the site data set is much larger than the background data set, the identification by chance alone of naturally-occurring elevated inorganic concentrations, is quite likely. The box and whisker plot shows that that both the median and 75th percentile concentrations are above the background concentrations for these two statistics. It should also be noted that although the maximum detected chromium concentration of 193.7 mg/kg at this sub-area is above the median background concentration of 30 mg/kg in Texas soils (TNRCC, 2001), the 95 percent UCL sub-area concentration of 18.8 mg/kg is below this regional background screening level.

Most of the estimated American Woodcock EEQ was from the ingestion of terrestrial soil invertebrates. The soil-to-invertebrate BCF that was used for the Tier 1 approach was based on the 90th percentile value of 3.162 from Sample et al. (1998). An alternative BCF value of 0.01 (wet weight basis) is available from USEPA (1999a). As the LHAAP Step 3 ERA uses receptor intakes based on a dry weight basis, this BCF is scaled up to 0.06 using the conversion factor of 5.99 presented in USEPA (1999a). As this alternative BCF value of 0.06 is over 50-fold lower than the Tier 1 BCF value used (3.162), the maximum EEQ of 7.3 for the American Woodcock would drop to below 1.0. However, there is limited technical basis for selecting the alternative BCF over the Sample et al. (1998) BCF.

The avian TRV used for the American Woodcock was based on an unpublished reproductive black duck study (Sample et al., 1996). As this study was not published and did not undergo peer review, the appropriateness of the NOAEL TRV (1.0 mg/kg-day) cannot be verified.

A spatial evaluation shows that soil samples with elevated chromium concentrations were generally isolated and not suggestive of a contaminated source area (**Appendix H**).

In conclusion, chromium was considered a final COPEC for the Industrial Sub-Area because:

- The maximum NOAEL EEQ was greater than 1.0.
- Chromium could not be definitively shown to be background related and fourteen samples had anomalous concentrations determined to be geochemical outliers.
- Direct toxicity to plants and earthworms was suggested, especially if chromium is present in the hexavalent form.

10.1.5.2 Waste Sub-Area

Chromium was selected as a final COPEC based on findings presented below.

The maximum chromium EEQ for terrestrial receptors for this sub-area was 6.5 for the American Woodcock, based on the NOAEL Tier 1 approach. This EEQ dropped to 0.7 for the NOAEL Tier 2 approach. The Short-Tailed Shrew had an EEQ of 1.9 and the other terrestrial receptors (Deer Mouse, Townsend's Big-Eared Bat, Red Fox, and Red-Tailed Hawk) had maximum EEQs that were less than 1.0. The maximum Raccoon EEQ was also less than 1.0.

Chromium concentrations in soil were suggestive of potential toxicity to earthworms; however, when the benchmark for trivalent chromium was used (i.e., the more likely form of chromium in site soil) instead of the more toxic hexavalent chromium, the EEQ dropped below 1.0 (**Section 7.1.1.3**). Chromium concentrations in soil, for both trivalent and hexavalent forms, were also suggestive of potential toxicity to plants.

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that the chromium concentration in sample LH-S116-02-1 was a geochemical outlier and may contain a component of contamination, however, all other chromium concentrations measured in Waste Sub-Area soils were consistent with background. Seven non-TAL samples should be considered a potential concern because the concentrations exceeded the background screening concentration.

Results of the UTL and UPL comparisons and the WRS test showed that chromium was potentially elevated with respect to background, however, given the number of chromium soil samples collected at this sub-area compared with the background data set (103 vs. 56 samples), this finding is not unexpected. As the site data set is much larger than the background data set, the identification by chance alone of naturally-occurring elevated inorganic concentrations is quite likely. The box and whisker plot shows that both the median and 75th percentile concentrations are above the background concentrations for these two statistics. It should also be noted that although the maximum detected chromium concentration of 59.6 mg/kg at this sub-area is above the median background concentration of 30 mg/kg in Texas soils (TNRCC, 2001), the 95 percent UCL sub-area concentration of 17.2 mg/kg is below this regional background screening level.

Most of the estimated American Woodcock EEQ was from the ingestion of terrestrial soil invertebrates. The soil-to-invertebrate BCF that was used for the Tier 1 approach was based on the 90th percentile value of 3.162 from Sample et al. (1998). An alternative BCF value of 0.06 is available (see **Section 10.1.5.1**). As this alternative BCF value of 0.06 is over 50-fold lower than the Tier 1 BCF value used (3.162), the maximum EEQ of 6.5 for the American Woodcock would drop to below 1.0 if the alternative BCF was used. However, there is limited technical basis for selecting the alternative BCF over the Sample et al. (1998) BCF.

The avian TRV used for the American Woodcock was based on an unpublished reproductive black duck study (Sample et al., 1996). As this study was not published and did not undergo peer review, the appropriateness of the NOAEL TRV (1.0 mg/kg-day) cannot be verified.

A spatial evaluation shows that soil samples with elevated chromium concentrations were somewhat isolated, but suggestive of a contaminated area (**Appendix H**). Four soil samples had chromium concentrations above background (29 mg/kg) and of these, three were within approximately 300 feet of each other.

In conclusion, chromium was considered a final COPEC for the Waste Sub-Area because:

- The maximum NOAEL EEQ was greater than 1.0 (6.5).
- Chromium could not be definitively shown to be background related.

- Direct toxicity to plants and earthworms was suggested, especially if chromium is present in the hexavalent form.
- Available data suggest the presence of a chromium source area.

10.1.5.3 Low Impact Sub-Area

Chromium was not selected as a final COPEC based on findings presented below.

The maximum chromium EEQ for terrestrial receptors for this sub-area was 4.9 for the American Woodcock, based on the NOAEL Tier 1 approach. This EEQ dropped to 0.6 for the NOAEL Tier 2 approach. The Short-Tailed Shrew had an EEQ of 1.3 and the other terrestrial receptors (Deer Mouse, Townsend's Big-Eared Bat, Red Fox, and Red-Tailed Hawk) had maximum EEQs that were less than 1.0. The maximum Raccoon EEQ was also less than 1.0.

Chromium concentrations in soil were suggestive of potential toxicity to earthworms; however, when the benchmark for trivalent chromium was used (i.e., the more likely form of chromium in site soil) instead of the more toxic hexavalent chromium, the EEQ dropped below 1.0 (**Section 7.1.1.2**). Chromium concentrations in soil, for both trivalent and hexavalent forms, were also suggestive of potential toxicity to plants.

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that one chromium soil sample (Sample LAP-31M2) had a concentration that was a geochemical outlier relative to the corresponding reference element concentrations, and may contain a component of contamination. Other soils samples measured in Low Impact Sub-Area soils were determined to be consistent with background. Twenty-one non-TAL soil samples could not be included in the geochemical evaluation, but concentrations of these samples were all below the corresponding background screening concentration.

Results of the UTL and UPL comparisons showed that chromium was potentially elevated with respect to background; however the WRS test showed that chromium was consistent with background. The number of chromium soil samples collected at this sub-area was much greater than those from the background data set (145 vs. 56 samples). As the site data set is much larger than the background data set, the identification by chance alone of naturally-occurring elevated inorganic concentrations is quite likely. The box and whisker plot shows that both the median and 75th percentile concentrations are below the background concentrations for these two statistics. It should also be noted that although the maximum detected chromium concentration of 59.4 mg/kg at this sub-area is above the median background concentration of 30 mg/kg in Texas soils (TNRCC, 2001), the 95 percent UCL sub-area concentration of 11.6 mg/kg is below this regional background screening level.

Most (98 percent) of the estimated American Woodcock EEQ was from the ingestion of terrestrial soil invertebrates. The soil-to-invertebrate BCF that was used for the Tier 1 approach was based on the 90th percentile value of 3.162 from Sample et al. (1998). An alternative BCF value of 0.06 is available (see **Section 10.1.5.1**). As this alternative BCF value of 0.06 is over 50-fold lower than the Tier 1 BCF value used (3.162), the maximum EEQ of 4.9 for the American Woodcock would drop to below 1.0. However, there is limited technical basis for selecting the alternative BCF over the Sample et al. (1998) BCF.

The avian TRV used for the American Woodcock was based on an unpublished reproductive black duck study (Sample et al., 1996). As this study was not published and did not undergo peer review, the appropriateness of the NOAEL TRV (1.0 mg/kg-day) cannot be verified.

A spatial evaluation shows that soil samples with elevated chromium concentrations are not suggestive of a contaminated source area (**Appendix H**). Only two soil samples had chromium concentrations above the background UTL of 36.7 mg/kg.

In conclusion, chromium was not considered a final COPEC for the Low Impact Sub-Area because:

- Geochemical results for all but one sample indicated the concentrations are consistent with background.
- Results of the WRS test showed that concentrations were background related.
- Available data do not suggest the presence of a chromium source area.

10.1.6 Lead

This section summarizes all of the lines of evidence for lead in soil presented in the Step 3 evaluation, and provides a recommendation as to whether the chemical should be carried forward to the BERA as a final COPEC. It should be noted that lead is known to be process related (**Section 1.3.10**).

10.1.6.1 Industrial Sub-Area

Lead was not selected as a final COPEC based on findings presented below.

The maximum lead EEQ for terrestrial receptors for this sub-area was 3.7 for the American Woodcock, based on the NOAEL Tier 1 approach. This EEQ dropped to 3.3 for the NOAEL Tier 2 approach. Other terrestrial receptors had EEQs that were all less than 1.0. The maximum Raccoon EEQ was less than 1.0.

The evaluation of direct toxicity to earthworms and plants resulted in Tier 1 and Tier 2 EEQs that were below 1 (**Section 7.1.1.1**).

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that lead concentrations measured in 19 samples collected from Industrial Sub-Area soils were geochemical outliers and may contain a component of contamination, while other samples were found to be consistent with background.

Results of the UTL and UPL comparisons, and the WRS test showed that lead was potentially elevated with respect to background; however, given the number of lead soil samples collected at this sub-area compared with the background data set (653 vs. 56 samples), this finding is not unexpected. As the site data set is much larger than the background data set, the identification by chance alone of naturally-occurring elevated inorganic concentrations is quite likely. The box and whisker plot shows that both the median and 75th percentile concentrations are above the background concentrations for these two statistics. It should also be noted that both the maximum detected lead concentration of 1,740 mg/kg and the 95 percent UCL concentration of 47.5 mg/kg at this sub-area are above the median background concentration of 15 mg/kg in Texas soils (TNRCC, 2001).

The majority of the estimated American Woodcock EEQ was from the ingestion of terrestrial invertebrates (77 percent), although 22 percent was from the ingestion of soil. The soil-to-invertebrate BCF that was used for the Tier 1 approach was based on a chemical-specific regression equation from Sample et al. (1999) that resulted in a BCF of 0.36.

The avian TRV used for the American Woodcock was based on a reproductive study for the Japanese quail using lead acetate that resulted in a NOAEL of 1.13 mg/kg-day (Sample et al., 1996). An alternative avian TRV from Sample et al. (1996) is based on a reproductive study for the American kestrel using metallic lead that results in a NOAEL of 3.85 mg/kg-day. If this alternative TRV was used for the American Woodcock, the maximum EEQ would drop by a factor of 3.4, from 3.7 to 1.1, and the Tier 2 NOAEL-based EEQ would drop from 3.3 to less than 1. Metals complexed to organic molecules are known to enhance bioavailability in oral diet studies (Suter et al., 2000). Metallic lead is the expected form of lead in the LHAAP environment, compared with lead acetate, because lead acetate use has not been documented at the Installation (Plexus, 2005). Lead acetate is not a form of lead found naturally in the environment. Lead acetate is used as a mordant in textile printing and dyeing, as a drier in paints and varnishes, and in preparing other lead compounds. It is made by treating litharge (lead monoxide, PbO) with acetic acid. Therefore, transformation of metallic lead into lead acetate in the natural environment is not a likely scenario, and without lead acetate ever being used at LHAAP, it would be highly unlikely to be present in environmental samples. Metallic lead, on the other hand, is known to have been used in a variety of Installation processes, including the use of lead bullets at firing ranges, lead-based paint, and as a component in munitions and flares (Plexus, 2005). Therefore, the use of the alternative TRV based on metallic lead is recommended as opposed to the original TRV, which is based on lead acetate.

A spatial evaluation shows that 16 soil samples with elevated lead concentrations (greater than 87.5 mg/kg) were within approximately 500 feet of each other at Site 49, and 11 samples with elevated concentrations were within approximately 500 feet of each other at Sites 2 and 3 (**Appendix H**). This finding suggests the presence of localized areas of elevated lead concentrations in soil.

In conclusion, lead was not considered a final COPEC for the Industrial Sub-Area because:

- The revised American Woodcock NOAEL EEQ using an alternative TRV was close to 1 (1.1).
- All other terrestrial receptors had EEQs that were estimated to be less than 1.
- Direct contact EEQs were below 1.

10.1.6.2 Waste Sub-Area

Lead was selected as a final COPEC based on findings presented below.

The maximum lead EEQ for terrestrial receptors for this sub-area was 3.8 for the American Woodcock, based on the NOAEL Tier 1 approach. This EEQ dropped to 2.6 for the NOAEL Tier 2 approach. All other terrestrial receptors had EEQs that were less than 1.0. The maximum Raccoon EEQ was also less than 1.0.

The evaluation of direct toxicity to earthworms resulted in Tier 1 and Tier 2 EEQs that were below 1. Lead concentrations in soil marginally exceeded plant toxicity screening values. However, the Tier 1 plant toxicity EEQ was 1 when rounded to one significant figure, and less than 1 using the Tier 2 average total soil concentration (**Section 7.1.1.3**).

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that lead concentrations were found to be consistent with background; however, 29 non-TAL sample results are a potential concern because the concentrations exceed the background screening concentration.

Results of the UTL and UPL comparisons, and the WRS test, showed that lead was potentially elevated with respect to background, however, given the number of lead soil samples collected at this sub-area compared with the background data set (103 vs. 56 samples), this finding is not unexpected. As the site data set is much larger than the background data set, the identification by chance alone of naturally-occurring elevated inorganic concentrations is quite likely. The box and whisker plot shows that both the median and 75th percentile concentrations are above the background concentrations for these two statistics. It should also be noted that both the maximum detected lead concentration of 1,290 mg/kg and the 95 percent UCL concentration of

55.8 mg/kg at this sub-area are above the median background concentration of 15 mg/kg in Texas soils (TNRCC, 2001).

The majority of the estimated American Woodcock EEQ was from the ingestion of soil invertebrates (77 percent), and 23 percent was from the ingestion of soil. The soil-to-invertebrate BCF that was used for the Tier 1 approach was based on a chemical-specific regression equation from Sample et al. (1999) that resulted in a BCF of 0.36.

The avian TRV used for the American Woodcock was based on a reproductive study for the Japanese quail using lead acetate that resulted in a NOAEL of 1.13 mg/kg-day (Sample et al., 1996). An alternative avian TRV, however, of 3.85 mg/kg-day is available (see **Section 10.1.6.1**). If this alternative TRV was used for the American Woodcock, the maximum EEQ would drop by a factor of 3.4, from 3.8 to 1.1, and the Tier 2 NOAEL-based EEQ would drop from 2.6 to 0.8. The use of the alternative TRV is recommended because it is based on metallic lead, whereas the original TRV is based on lead acetate (see **Section 10.1.6.1**). Lead in a metallic form is much more likely at LHAAP.

A spatial evaluation shows that seven soil samples with elevated lead concentrations (greater than 91.8 mg/kg) were located within approximately 300 feet of each other near Site 17 (**Appendix H**). This finding suggests the presence of a localized area of elevated lead concentrations in soil.

New soil samples were collected at the Pistol Range in February 2006, a site located within the Waste Sub-Area. Eighty-eight soil samples, up a maximum depth of 30 inches, were collected and analyzed using an x-ray fluorescence (XRF) field screening technique, and nine of these soils samples were analyzed in the laboratory. Results are summarized as follows:

Pistol Range Soil Data	Sample Size	Maximum Detected Concentration (mg/kg)	No. of Samples with Concentration Above 500 mg/kg	Percentage of Samples with Results Above 500 mg/kg
XRF Results	88	3,978	10	11%
Laboratory Results	9	5,240	4	44%

Because these samples were collected after the ERA models were run, they are not reflected in the previous analysis. As the existing lead data base used to evaluate the Waste Sub-Area had 103 soil samples, with a maximum detected lead concentration of 1,290 mg/kg, a mean of 46 mg/kg and a 95% UCL of 55.8 mg/kg, it is relatively apparent that inclusion of the new Pistol Range data, even accounting for the uncertainty associated with the XRF results, would significantly increase the estimated lead exposure for the modeled wildlife receptors. Therefore, lead was considered a final COPEC for the Waste Sub-Area based on the elevated concentrations measured in soil samples collected from the Pistol Range.

10.1.6.3 Low Impact Sub-Area

Lead was not selected as a final COPEC based on findings presented below.

The maximum lead EEQ for terrestrial receptors for this sub-area was 1.5 for the American Woodcock, based on the NOAEL Tier 1 approach. This EEQ dropped to 1.3 for the NOAEL Tier 2 approach. All other terrestrial receptors had EEQs that were less than 1.0. The maximum Raccoon EEQ was also less than 1.0.

The evaluation of direct toxicity to earthworms and plants resulted in Tier 1 and Tier 2 EEQs that were below 1 (**Section 7.1.1.2**).

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that lead concentrations were found to be geochemical outliers in ten samples relative to the corresponding reference element concentrations and may contain a component of contamination. Other sample concentrations were found to be consistent with background; however, two sample results (LH11-SB06 [0-2] and 940822-XXSB16-N00) should be considered a potential concern because the concentrations exceeded the background screening level.

Results of the UTL and UPL comparisons, and the WRS test, showed that lead was potentially elevated with respect to background; however, given the number of lead soil samples collected at this sub-area compared with the background data set (147 vs. 56 samples), this finding is not unexpected. As the site data set is much larger than the background data set, the identification by chance alone of naturally-occurring elevated inorganic concentrations is quite likely. The box and whisker plot shows that both the median and 75th percentile concentrations are above the background concentrations for these two statistics. It should also be noted that both the maximum detected lead concentration of 197 mg/kg and the 95 percent UCL concentration of 23 mg/kg at this sub-area are above the median background concentration of 15 mg/kg in Texas soils (TNRCC, 2001).

The majority of the estimated American Woodcock EEQ was from the ingestion of terrestrial invertebrates (80 percent), and 19 percent was from the ingestion of soil. The soil-to-invertebrate BCF that was used for the Tier 1 approach was based on a chemical-specific regression equation from Sample et al. (1999) that resulted in a BCF of 0.44.

The avian TRV used for the American Woodcock was based on a reproductive study for the Japanese quail using lead acetate that resulted in a NOAEL of 1.13 mg/kg-day (Sample et al., 1996). An alternative avian TRV, however, of 3.85 mg/kg-day is available (see **Section 10.1.6.1**). If this alternative TRV was used for the American Woodcock, the maximum EEQ would drop by a factor of 3.4, from 1.5 to 0.4, and the Tier 2 NOAEL-based EEQ would drop from 1.3 to 0.1. The use of the alternative TRV is recommended because it is based on metallic lead, whereas the original TRV is based on lead acetate, which is a form of lead that is likely to be much more bioavailable than the chemical form of lead in soil at LHAAP (see **Section 10.1.6.1**).

A spatial evaluation shows that although some soil samples had elevated lead concentrations (i.e., greater than 38.3 mg/kg), these samples were isolated and not suggestive of a contaminated source area (**Appendix H**).

In conclusion, lead was not considered a final COPEC for the Low Impact Sub-Area because:

- The revised American Woodcock NOAEL-EEQ using an alternative TRV was below 1.
- All other terrestrial receptors had EEQs that were estimated to be less than 1.0.
- Direct contact EEQs were below 1.
- Available data do not suggest the presence of a lead source area.

10.1.7 Manganese

This section summarizes all of the lines of evidence for manganese in soil presented in the Step 3 evaluation, and provides a recommendation as to whether the chemical should be carried forward to the BERA as a final COPEC. It should be noted that manganese is known to be process related (**Section 1.3.10**).

10.1.7.1 Industrial Sub-Area

Manganese was not selected as a preliminary COPEC in this sub-area (**Table 6-28**).

10.1.7.2 Waste Sub-Area

Manganese was not selected as a preliminary COPEC in this sub-area (**Table 6-28**).

10.1.7.3 Low Impact Sub-Area

Manganese was not selected as a final COPEC based on findings presented below.

The maximum manganese EEQ for terrestrial receptors for this sub-area was less than 1, and the maximum Raccoon EEQ was less than 1.

Manganese concentrations in soil were suggestive of potential toxicity to plants (**Section 7.1.1.2**). However, background UTL and UPL values of 2,240 and 1,340 mg/kg were above the plant toxicity screening value of 500 mg/kg, suggesting that this screening value is inappropriate for the LHAAP area. In addition, the plant toxicity EEQ was less than 2 using the Tier 1 total soil concentration.

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that the manganese concentration measured in one sample (CLNWR218) collected from Low Impact Sub-Area soils was a geochemical outlier and may contain a component of contamination, while other samples were found to be consistent with background.

Results of the UTL and UPL comparisons and the WRS test showed that manganese was potentially elevated with respect to background. However, given the number of manganese soil samples collected at this sub-area compared with the background data set (124 vs. 56 samples), this finding is not unexpected. As the site data set is much larger than the background data set, the identification by chance alone of naturally-occurring elevated inorganic concentrations is quite likely. The box and whisker plot shows that both the median and 75th percentile concentrations are above the background concentrations for these two statistics. It should also be noted that both the maximum detected manganese concentration of 5,436 mg/kg and the 95 percent UCL concentration of 962 mg/kg at this sub-area are above the median background concentration of 300 mg/kg in Texas soils (TNRCC, 2001).

A spatial evaluation shows that five soil samples had elevated manganese concentrations (greater than 3,140 mg/kg); however, the apparently random locations of these samples are not suggestive of a contaminated source area (**Appendix H**).

In conclusion, manganese was not considered a final COPEC for the Low Impact Sub-Area because:

- All terrestrial receptors had EEQs that were estimated to be less than 1.0.
- Geochemical results for all but one sample indicated the concentrations are consistent with background.
- Plant toxicity screening values appear to be inappropriate for the site, as background concentrations also exceed the plant toxicity screening value.
- Available data do not suggest the presence of a manganese source area.

10.1.8 Mercury

This section summarizes all of the lines of evidence for mercury in soil presented in the Step 3 evaluation, and provides a recommendation as to whether the chemical should be carried forward to the BERA as a final COPEC. It should be noted that mercury is associated with a known release at the installation (**Section 1.3.10**).

10.1.8.1 Industrial Sub-Area

Mercury was not selected as a final COPEC based on findings presented below.

The maximum mercury EEQ for terrestrial receptors for this sub-area was below 1.0.

Mercury concentrations in soil were suggestive of potential toxicity to earthworms. As both the UTL and UPL background concentrations (0.134 and 0.11 mg/kg) exceed the earthworm toxicity value of 0.1 mg/kg, this suggests this screening value is inappropriate for the LHAAP area. Mercury concentrations in soil (using the Tier 1 95 percent UCL) were also suggestive of plant toxicity. However, the EEQ dropped below 1.0 when the Tier 2 average concentration was used (**Section 7.1.1.1**).

Results of the UTL and UPL comparisons showed that mercury was potentially elevated with respect to background, however, given the number of soil samples analyzed for mercury collected at this sub-area compared with the background data set (654 vs. 56 samples), this finding is not unexpected. As the site data set is much larger than the background data set, the identification by chance alone of naturally-occurring elevated inorganic concentrations is quite likely. The WRS test could not be run because more than 50 percent of the samples in either the background or site data set were nondetect. The box and whisker plot shows that both the median and 75th percentile concentrations are slightly above the background concentrations for these two statistics. It should also be noted that the MDC of 104.6 mg/kg and the 95 percent UCL total soil concentration of 0.589 mg/kg at this sub-area are above the median background concentration of 0.04 mg/kg in Texas soils (TNRCC, 2001).

In conclusion, mercury was not considered a final COPEC for the Industrial Sub-Area because:

- All terrestrial receptors had EEQs that were estimated to be less than 1.0.
- Earthworm toxicity screening values appear to be inappropriate for the site, as background concentrations also exceed the earthworm toxicity screening value.

10.1.8.2 Waste Sub-Area

Mercury was not selected as a final COPEC because the maximum mercury EEQ for terrestrial receptors, including the Raccoon, was below 1.0 and no earthworm or plant toxicity was predicted.

10.1.8.3 Low Impact Sub-Area

Mercury was not selected as a final COPEC because the maximum mercury EEQ for terrestrial receptors, including the Raccoon, was below 1.0 and no earthworm or plant toxicity was predicted.

10.1.9 Selenium

This section summarizes all of the lines of evidence for selenium in soil presented in the Step 3 evaluation, and provides a recommendation as to whether the chemical should be carried forward to the BERA as a final COPEC. It should be noted that selenium is not known to be related to any processes at the installation (**Section 1.3.10**).

10.1.9.1 Industrial Sub-Area

Selenium was not selected as a final COPEC based on findings presented below.

The maximum selenium EEQ for terrestrial receptors for this sub-area was below 1.0.

Selenium concentrations in soil were suggestive of potential toxicity to plants (**Section 7.1.1.1**). However, the background UTL and UPL values of 6.96 and 5.61 mg/kg were above the plant toxicity screening value of 1 mg/kg, suggesting this screening value is inappropriate for the LHAAP area.

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that the selenium concentration measured in one sample (49SB13[0-0.5]) collected from Industrial Sub-Area soils was a geochemical outlier and may contain a component of contamination, while other samples were found to be consistent with background.

Results of the UTL and UPL comparisons showed that selenium was potentially elevated with respect to background; however, given the number of soil samples analyzed for selenium collected at this sub-area compared with the background data set (654 vs. 56 samples), this finding is not unexpected. As the site data set is much larger than the background data set, the identification by chance alone of naturally-occurring elevated inorganic concentrations is quite likely. The WRS test could not be run as the number of nondetect samples was greater than 50 percent. The box and whisker plot shows that both the median and 75th percentile concentrations are below the background concentrations for these two statistics. It should also be noted that both the maximum detected selenium concentration of 185 mg/kg and the 95 percent UCL concentration of 1.5 mg/kg at this sub-area are above the median background concentration of 0.3 mg/kg in Texas soils (TNRCC, 2001).

A spatial evaluation shows that only four soil samples had elevated selenium concentrations greater than 5.6 mg/kg; however, these samples were not co-located and, therefore, not suggestive of a source area. A spatial plot was not prepared for selenium due to the EEQ being very close to 1.

In conclusion, selenium was not considered a final COPEC for the Industrial Sub-Area because:

- All terrestrial EEQs were below 1.
- Geochemical results for all but one sample indicated the concentrations are consistent with background.
- Plant toxicity screening values appear to be inappropriate for the site, as background concentrations also exceed the plant toxicity screening value.
- Available data do not suggest the presence of a selenium source area.

10.1.9.2 Waste Sub-Area

Selenium was not selected as a final COPEC because the maximum selenium EEQ for terrestrial receptors was less than 1 and the maximum Raccoon EEQ was also less than 1.

10.1.9.3 Low Impact Sub-Area

Selenium was not selected as a final COPEC because the maximum selenium EEQ for terrestrial receptors was less than 1 and the maximum Raccoon EEQ was also less than 1.

10.1.10 Vanadium

This section summarizes all of the lines of evidence for vanadium in soil presented in the Step 3 evaluation, and provides a recommendation as to whether the chemical should be carried forward to the BERA as a final COPEC. It should be noted that vanadium is not known to be related to any processes at the installation (**Section 1.3.10**).

10.1.10.1 Industrial Sub-Area

Vanadium was not selected as a final COPEC based on findings presented below; however, it is retained on the background list for consideration by risk managers in Step 7.

The maximum vanadium EEQ for terrestrial receptors for this sub-area was 2.9 for the Short-Tailed Shrew, based on the NOAEL Tier 1 approach. This EEQ dropped to 2.2 for the NOAEL Tier 2 approach. Other terrestrial receptors (Deer Mouse, Red Fox, American Woodcock, Townsend's Big-Eared Bat, and Red-Tailed Hawk) had EEQs below 1.0. The maximum Raccoon EEQ was 0.4).

Vanadium concentrations in soil were suggestive of potential toxicity to plants (**Section 7.1.1.1**). However, the background UTL and UPL values of 52.9 and 44.4 mg/kg were above the plant toxicity screening value of 2 mg/kg, suggesting this screening value is inappropriate for the LHAAP area.

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that vanadium concentrations measured in Industrial Sub-Area soils were consistent with background.

Results of the UTL and UPL comparisons and the WRS test showed that vanadium was potentially elevated with respect to background; however, given the number of vanadium soil samples collected at this sub-area compared with the background data set (205 vs. 56 samples), this finding is not unexpected. As the site data set is much larger than the background data set, the identification, by chance alone, of detecting higher concentrations in the site samples than in background samples is quite likely. The box and whisker plot shows that the sub-area median was above the background median concentration, but not above the background 75th percentile concentration. In addition, the 75th percentile concentrations for the sub-area and the background data sets were very similar. It should also be noted that although the maximum detected vanadium concentration of 75.9 mg/kg at this sub-area is above the median background concentration of 50 mg/kg in Texas soils (TNRCC, 2001), the 95 percent UCL sub-area concentration of 26 mg/kg is below this regional background screening level.

Most of the estimated Short-Tailed Shrew EEQ was from the ingestion of soil (60 percent). There is a high degree of uncertainty in how much soil small mammals actually consume, and the soil ingestion rate used in the calculation of the EEQ may be overly conservative.

The small mammal TRV used for the Short-Tailed Shrew was based on a chronic rat study (Sample et al., 1996) in which the lowest dose was defined as the LOAEL. A UF of 0.1 was applied to this LOAEL to estimate a NOAEL for vanadium. The actual NOAEL could have occurred at a considerably greater dose level. If a UF of 0.5 was applied instead of 0.1, the estimated NOAEL EEQ would drop by a factor of 5, from 2.9 to 0.6. However, a UF of 0.1 is the recommended default value.

A spatial evaluation shows that soil sample locations with elevated zinc concentrations (greater than or equal to 46 mg/kg) were isolated within the sub-area (**Appendix H**). These findings do not suggest the presence of localized areas of elevated vanadium concentrations in soil.

In conclusion, vanadium was not considered a final COPEC for the Industrial Sub-Area because:

- Geochemical results indicated the concentrations are consistent with background.
- All terrestrial receptors except for the Short-Tailed Shrew had EEQs that were estimated to be less than 1.0.
- Spatial data do not suggest the presence of localized areas of elevated vanadium concentrations.

Vanadium is retained on the background list for consideration by risk managers in Step 7.

10.1.10.2 Waste Sub-Area

Vanadium was not selected as a final COPEC based on findings presented below; however, it is retained on the background list for consideration by risk managers in Step 7.

The maximum vanadium EEQ for terrestrial receptors for this sub-area was 2.7 for the Short-Tailed Shrew based on the NOAEL Tier 1 approach. This EEQ dropped to 1.9 for the NOAEL Tier 2 approach. Other terrestrial receptors (Deer Mouse, Red Fox, American Woodcock, Townsend's Big-Eared Bat, and Red-Tailed Hawk) had EEQs below 1.0. The maximum Raccoon EEQ was less than 1.

Vanadium concentrations in soil were suggestive of potential toxicity to plants (**Section 7.1.1.3**). However, the background UTL and UPL values of 52.9 and 44.4 mg/kg were above the plant toxicity screening value of 2 mg/kg, suggesting this screening value is inappropriate for the LHAAP area.

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that vanadium concentrations measured in Waste Sub-Area soils were consistent with background.

Results of the UTL and UPL comparisons showed that vanadium was not elevated with respect to background, and results of the WRS test also showed that vanadium was not elevated with respect to background. The number of vanadium soil samples collected at this sub-area was lower than those from the background data set (22 vs. 56 samples). The box and whisker plot shows that the median concentrations of the sub-area and the background data sets were similar, and that the 75th percentile concentration of the sub-area was lower than the background 75th percentile. It should also be noted that both the maximum detected vanadium concentration of 43.3 mg/kg and the 95 percent UCL concentration of 23.6 mg/kg at this sub-area are below the median background concentration of 50 mg/kg in Texas soils (TNRCC, 2001).

Most of the estimated Short-Tailed Shrew EEQ was from the ingestion of soil (59 percent). There is a high degree of uncertainty in how much soil small mammals actually consume, and the soil ingestion rate used in the calculation of the EEQ may be overly conservative.

The small mammal TRV used for the Short-Tailed Shrew was based on chronic exposure of the rat in which the lowest dose was defined as the LOAEL. A UF of 0.1 was applied to this LOAEL to estimate a NOAEL for vanadium. The actual NOAEL could have occurred at a considerably greater dose level. If a UF of 0.5 was applied instead of 0.1, the estimated NOAEL

EEQs would drop by a factor of 5, from 2.7 to 0.5 and from 1.9 to 0.4, respectively. However, a UF of 0.1 is the recommended default value.

In conclusion, vanadium was not considered a final COPEC for the Waste Sub-Area because:

- All terrestrial receptors except for the Short-Tailed Shrew had EEQs that were estimated to be less than 1.0.
- Results of the UTL and UPL comparisons and results of the WRS test showed that vanadium was not elevated with respect to background.
- Geochemical results indicated that the concentrations are consistent with background.

Vanadium is retained on the background list for consideration by risk managers in Step 7.

10.1.10.3 Low Impact Sub-Area

Vanadium was not selected as a final COPEC based on findings presented below; however, it is retained on the background list for consideration by risk managers in Step 7.

The maximum vanadium EEQ for terrestrial receptors for this sub-area was 1.7 for the Short-Tailed Shrew, based on the NOAEL Tier 1 approach. This EEQ dropped to 1.3 for the NOAEL Tier 2 approach. Other terrestrial receptors (Deer Mouse, Townsend's Big-Eared Bat, Red Fox, American Woodcock, and Red-Tailed Hawk) had EEQs below 1.0. The maximum Raccoon EEQ was 0.2.

Vanadium concentrations in soil were suggestive of potential toxicity to plants (**Section 7.1.1.2**). However, the background UTL and UPL values of 52.9 and 44.4 mg/kg were above the plant toxicity screening value of 2 mg/kg, suggesting this screening value is inappropriate for the LHAAP area.

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that vanadium concentrations measured in Low Impact Sub-Area soils were consistent with background.

Results of the UTL and UPL comparisons showed that vanadium was potentially elevated with respect to background; however, the WRS test showed that vanadium was not elevated with respect to background. Given the number of vanadium soil samples collected at this sub-area compared with the background data set (107 vs. 56 samples), detections above the UTL and UPL values are not unexpected. As the site data set is much larger than the background data set, the identification, by chance alone, of detecting higher concentrations in the site samples than in background samples is quite likely. The box and whisker plot shows that both the median and 75^{th} percentile concentrations of the sub-area are below the background data set. It should also be noted that although the maximum detected vanadium concentration of 53 mg/kg at this sub-area is above the median background concentration of 50 mg/kg in Texas soils (TNRCC, 2001), the 95 percent UCL sub-area concentration of 15.4 mg/kg is well below this regional background screening level.

Most of the estimated Short-Tailed Shrew EEQ was from the ingestion of soil (60 percent). There is a high degree of uncertainty in how much soil small mammals actually consume, and the soil ingestion rate used in the calculation of the EEQ may be overly conservative.

The small mammal TRV used for the Short-Tailed Shrew was based on a chronic rat study in which the lowest dose was defined as the LOAEL. A UF of 0.1 was applied to this LOAEL to estimate a NOAEL for vanadium. The actual NOAEL could have occurred at a considerably greater dose level. If a UF of 0.5 was applied instead of 0.1, the estimated NOAEL EEQs would drop by a factor of 5, from 1.7 to 0.3. However, a UF of 0.1 is the recommended default value.

A spatial evaluation shows that soil sample locations with elevated vanadium concentrations (greater than or equal to 46 mg/kg) were isolated within the sub-area (**Appendix H**). These findings do not suggest the presence of localized areas of elevated zinc concentrations in soil.

In conclusion, vanadium was not considered a final COPEC for the Low Impact Sub-Area because:

- All terrestrial receptors except for the Short-Tailed Shrew had EEQs that were estimated to be less than 1.0.
- Results of the WRS test showed that vanadium was not elevated with respect to background.
- Geochemical results indicated the concentrations are consistent with background.
- Spatial data do not suggest the presence of localized areas of elevated zinc concentrations.

Vanadium is retained on the background list for consideration by risk managers in Step 7.

10.1.11 Zinc

This section summarizes all of the lines of evidence for zinc in soil presented in the Step 3 evaluation, and provides a recommendation as to whether the chemical should be carried forward to the BERA as a final COPEC. It should be noted that zinc is associated with general operations of the installation (**Section 1.3.10**).

10.1.11.1 Industrial Sub-Area

Zinc was selected as a final COPEC based on findings presented below.

The maximum zinc EEQ for terrestrial receptors for this sub-area was 3.1 for the American Woodcock based on the NOAEL Tier 1 approach. This EEQ dropped to 3.0 for the NOAEL Tier 2 approach. All other terrestrial receptors had EEQs that were less than 1.0. The maximum Raccoon EEQ was also less than 1.0.

Zinc concentrations in soil marginally exceeded plant toxicity screening values. However, zinc plant toxicity EEQs were 1, when rounded to one significant figure (**Section 7.1.1.1**).

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that zinc concentrations measured in 84 samples collected from Industrial Sub-Area soils were geochemical outliers and may contain a component of contamination while other samples were found to be consistent with background.

Results of the UTL and UPL comparisons, and the WRS test, showed that zinc was potentially elevated with respect to background; however, given the number of zinc soil samples collected at this sub-area compared with the background data set (543 vs. 56 samples), this finding is not unexpected. As the site data set is much larger than the background data set, the identification by chance alone of naturally-occurring elevated inorganic concentrations is quite likely. The box and whisker plot shows that both the median and 75th percentile concentrations are above the background concentrations for these two statistics. It should also be noted that both the maximum detected zinc concentration of 2,580 mg/kg and the 95 percent UCL concentration of 61.6 mg/kg at this sub-area are above the median background concentration of 30 mg/kg in Texas soils (TNRCC, 2005).

The majority of the estimated American Woodcock EEQ was from the ingestion of terrestrial invertebrates (98 percent). The soil-to-invertebrate BCF that was used for the Tier 1 approach was based on a chemical-specific regression equation from Sample et al. (1999) that resulted in a BCF of 4.65.

The avian TRV used for the American Woodcock was based on a reproductive study for the white longhorn hens using zinc sulfate that resulted in a NOAEL of 14.5 mg/kg-day and a LOAEL of 130.9 mg/kg-day (Sample et al., 1996). Alternative avian TRVs recommended by the Department of the Navy (1998) after evaluation of the results of seven avian studies are based on a study that measured adverse reproductive effects, organ weight, and body weight for the mallard duck using zinc carbonate that resulted in a NOAEL of 17.2 mg/kg-day and a LOAEL of 172 mg/kg-day. If this alternative NOAEL TRV was used for the American Woodcock, the maximum EEQ would drop by a factor of 1.2, from 3.1 to 2.6, and the Tier 2 NOAEL-based

EEQ would drop from 3.0 to 2.5. The use of the alternative TRVs are recommended because they are based on the results of a review of seven avian studies, including the study used by Sample et al. (1996). It should be noted that the Department of the Navy (1998) and the USEPA (1999a) present avian NOAEL TRVs of 126.5 and 130.9 mg/kg-day derived from the reproductive study on white longhorn hens used by Sample et al. (1996), and not the NOAEL value of 14.5 mg/kg-day, suggesting problems with the TRV derived for zinc by Sample et al. (1996).

A spatial evaluation shows that nine soil sample locations with elevated zinc concentrations (greater than or equal to 68.01 mg/kg) were within 500 feet of each other at Sites 2 and 3. In addition, nineteen soil samples with elevated zinc concentrations were within an area of approximately 650 by 1,700 feet in size near Site 49 (**Appendix H**). These findings suggest the presence of localized areas of elevated zinc concentrations in soil.

In conclusion, zinc was considered a final COPEC for the Industrial Sub-Area because:

- The American Woodcock NOAEL EEQ was above 1.
- Zinc could not be definitively shown to be background related and 84 of the samples were anomalous concentrations determined to be geochemical outliers.
- Spatial data suggest the presence of localized areas of elevated zinc concentrations.

10.1.11.2 Waste Sub-Area

Zinc was not selected as a final COPEC based on findings presented below; however, it is retained on the background list for consideration by risk managers in Step 7.

The maximum zinc EEQ for terrestrial receptors for this sub-area was 2.9 for the American Woodcock, based on the NOAEL Tier 1 approach. This EEQ dropped to 2.7 for the NOAEL Tier 2 approach. The maximum Raccoon EEQ was less than 1.0.

Zinc concentrations in soil marginally exceeded plant toxicity screening values. However, zinc plant toxicity EEQs were 1, when rounded to one significant figure (**Section 7.1.1.3**).

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that zinc concentrations were found to be consistent with background

Results of the UTL and UPL comparisons, and the WRS test, showed that zinc was potentially elevated with respect to background. The numbers of zinc soil samples collected at this sub-area were slightly lower than those collected at the background area (39 vs. 56 samples). The box and whisker plot shows that both the median and 75th percentile concentrations are above the background concentrations for these two statistics. It should also be noted that both the maximum detected zinc concentration of 250 mg/kg and the 95 percent UCL concentration of 51.7 mg/kg at this sub-area are above the median background concentration of 30 mg/kg in Texas soils (TNRCC, 2001).

The majority of the estimated American Woodcock EEQ was from the ingestion of terrestrial invertebrates (98 percent), and the rest was from the ingestion of soil. The soil-to-invertebrate BCF that was used for the Tier 1 approach was based on a chemical-specific regression equation from Sample et al. (1999) that resulted in a BCF of 5.31.

The avian TRV used for the American Woodcock was based on a reproductive study for white longhorn hens using zinc sulfate that resulted in a NOAEL of 14.5 mg/kg-day and a LOAEL of 130.9 mg/kg-day (Sample et al., 1996). Alternative avian TRVs are recommended by the Department of the Navy (1998) (discussed previously in **Section 10.1.11.1**). If the alternative NOAEL TRV was used for the American Woodcock, the maximum EEQ would drop by a factor of 1.2, from 2.9 to 2.4. The use of the alternative TRVs are recommended because they are based on the results of a review of seven avian studies, including the study used by Sample et al. (1996) (see **Section 10.1.11.1**).

A spatial evaluation shows that four soil sample locations with elevated zinc concentrations (greater than 51.5 mg/kg) were within an area of approximately 300 feet by 200 feet in size near Site 17 (**Appendix H**). This finding suggests the presence of a localized area of elevated zinc concentrations in soil; however, this area of approximately 1.4 acres is only about 15 percent of the average home range of the American Woodcock (23 hectares or 9.3 acres).

In conclusion, zinc was not considered a final COPEC for the Waste Sub-Area because:

- All terrestrial receptors (except the American Woodcock) had EEQs that were estimated to be less than 1.0. The revised American Woodcock NOAEL EEQ is 2.4.
- Geochemical results indicated the concentrations are consistent with background.
- Although available data suggest the presence of a localized area with elevated zinc concentrations, the size of this area was only about 15 percent of the home range of the American Woodcock.

Zinc is retained on the background list for consideration by risk managers in Step 7.

10.1.11.3 Low Impact Sub-Area

Zinc was not selected as a final COPEC based on findings presented below.

The maximum zinc EEQ for terrestrial receptors for this sub-area was 2.8 for the American Woodcock, based on the NOAEL Tier 1 approach. This EEQ dropped to 2.6 for the NOAEL Tier 2 approach. The maximum Raccoon EEQ was less than 1.0.

Zinc concentrations in soil marginally exceeded plant toxicity screening values. However, zinc plant toxicity EEQs were 1, when rounded to one significant figure (**Section 7.1.1.2**).

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that zinc concentrations measured in thirty-three samples collected from Low Impact Sub-Area soils were geochemical outliers and may contain a component of contamination, while other samples were found to be consistent with background.

Results of the UTL and UPL comparisons, and the WRS test, showed that zinc was potentially elevated with respect to background. However, given the number of zinc soil samples collected at this sub-area compared with the background data set (124 vs. 56 samples), this finding is not unexpected. As the site data set is much larger than the background data set, the identification by chance alone of naturally-occurring elevated inorganic concentrations is quite likely. The box and whisker plot shows that both the median and 75th percentile concentrations are above the background concentrations for these two statistics. It should also be noted that both the maximum detected zinc concentration of 499 mg/kg and the 95 percent UCL concentration of 59.7 mg/kg at this sub-area are above the median background concentration of 30 mg/kg in Texas soils (TNRCC, 2001).

The majority (98 percent) of the estimated American Woodcock EEQ was from the ingestion of terrestrial invertebrates, and the rest was from the ingestion of soil. The soil-to-invertebrate BCF that was used for the Tier 1 approach was based on a chemical-specific regression equation from Sample et al. (1999) that resulted in a BCF of 5.53.

The avian TRV used for the American Woodcock was based on a reproductive study for white longhorn hens using zinc sulfate that resulted in a NOAEL of 14.5 mg/kg-day and a LOAEL of 130.9 mg/kg-day (Sample et al., 1996). Alternative avian TRVs are recommended by the Department of the Navy (1998). If the alternative NOAEL TRV was used for the American Woodcock, the maximum EEQ would drop by a factor of 1.2, from2.8 to 2.3, and the Tier 2 NOAEL-based EEQ would drop from 2.6 to 2.2. The use of the alternative TRVs are recommended because they are based on the results of a review of seven avian studies, including the study used by Sample et al. (1996) (see **Section 10.1.11.1**).

A spatial evaluation shows that ten soil sample locations with elevated zinc concentrations (greater than 150 mg/kg) were within an area of approximately 5,000 feet by 2,500 feet (i.e., 287 acres) in size at Site 45 (**Appendix H**). These samples were collected according to a sampling plan that was biased to locate expected areas of high contamination near drains at magazine bunkers at Site 45. These higher concentrations of zinc were attributed to galvanized iron used in construction materials (Shaw, 2004e). Demolition of these bunkers has occurred since these samples were collected in 2000.

In conclusion, zinc was not considered a final COPEC for the Low Impact Sub-Area because:

- The revised American Woodcock NOAEL-EEQ is 2.3 (very close to 1).
- All other terrestrial receptors had EEQs that were estimated to be less than 1.0.
- Available data do not suggest a CERCLA-related release.

10.1.12 Aroclor 1254

This section summarizes all of the lines of evidence for Aroclor 1254 in soil presented in the Step 3 evaluation, and provides a recommendation as to whether the chemical should be carried forward to the BERA as a final COPEC. It should be noted that Aroclor 1254 is not known to be related to any processes at the installation (**Section 1.3.10**).

10.1.12.1 Industrial Sub-Area

Aroclor 1254 was not selected as a final COPEC based on findings presented below.

The maximum Aroclor 1254 EEQ for terrestrial receptors for this sub-area was 1.4 for the Short-Tailed Shrew, based on the NOAEL Tier 1 approach. This EEQ dropped to less than 1 for the NOAEL Tier 2 approach. Other terrestrial receptors had EEQs that were less than 1.0, including the raccoon.

It should be noted that the maximum combined Aroclor EEQ for terrestrial receptors for this sub-area was 2.1 for the Short-Tailed Shrew, based on the NOAEL Tier 1 approach.

The evaluation of direct toxicity to earthworms and plants resulted in Tier 1 and Tier 2 EEQs that were below 1 for plants. Appropriate benchmarks were not available for earthworms (**Section 7.1.1.1**).

A geochemical analysis was not performed for Aroclor 1254 as it is not expected to complex with inorganic constituents. Background comparisons were not performed because Aroclor 1254 is not expected to be background related.

Most (99 percent) of the estimated Short-Tailed Shrew EEQ was from the ingestion of terrestrial invertebrates, and the rest was from the ingestion of soil. The soil-to-invertebrate BCF that was used for the Tier 1 approach was based on a chemical-specific Kow regression equation derived from a combination of the approaches recommended by USEPA (2005) and Jager (1998) that resulted in a Tier 1 BCF of 16.2 and a Tier 2 BCF of 9.4.

A spatial evaluation shows that six soil samples had elevated Aroclor 1254 concentrations (greater than 0.036 mg/kg); however, the apparently random locations of these samples are not suggestive of a contaminated source area (**Appendix H**).

In conclusion, Aroclor 1254 was not considered a final COPEC for the Industrial Sub-Area because:

- The maximum NOAEL-based Tier 1 EEQ was very close to 1 (1.4).
- All other terrestrial receptors had EEQs that were estimated to be less than 1.0.
- No direct toxicity to plants was predicted, although earthworms do not have a readily-available toxicity screening value.
- Results of a spatial evaluation do not suggest the presence of a localized contaminated source area.

10.1.12.2 Waste Sub-Area

As the maximum Aroclor 1254 EEQ for terrestrial receptors for this sub-area was less than 1 and the maximum Raccoon EEQ was also less than 1, Aroclor 1254 is not considered a final COPEC for the Waste Sub-Area. It should be noted that the maximum combined Aroclor EEQ for terrestrial receptors for this sub-area was also below 1.0.

10.1.12.3 Low Impact Sub-Area

As the maximum Aroclor 1254 EEQ for terrestrial receptors for this sub-area was less than 1, and the maximum Raccoon EEQ was also less than 1, Aroclor 1254 is not considered a final COPEC for the Low Impact Sub-Area. It should be noted that the maximum combined Aroclor EEQ for terrestrial receptors for this sub-area was also below 1.0.

10.1.13 DDD

This section summarizes all of the lines of evidence for DDD in soil presented in the Step 3 evaluation, and provides a recommendation as to whether the chemical should be carried forward to the BERA as a final COPEC. It should be noted that DDD is associated with general operations of the installation (i.e., the assumed lawful application of pesticide) (**Section 1.3.10**).

10.1.13.1 Industrial Sub-Area

DDD was not selected as a final COPEC based on findings presented below.

The maximum DDD EEQ for terrestrial receptors for this sub-area was 1.2 for the American Woodcock, based on the NOAEL Tier 1 approach. This EEQ dropped to less than 1 for the NOAEL Tier 2. Other terrestrial receptors (Red-Tailed Hawk, Short-Tailed Shrew, Deer Mouse, Townsend's Big-Eared Bat, and Red Fox) had maximum EEQs that were less than 1.0. The maximum Raccoon EEQ was also less than 1. The estimated EEQ taking into account DDT, DDD, and DDE additivity is 6.2 for the American Woodcock.

A geochemical analysis was not performed for DDD as it is not expected to complex with inorganic constituents. Background comparisons were not performed because DDD was not detected in the background data set.

Most (99 percent) of the estimated American Woodcock EEQ was from the ingestion of terrestrial invertebrates, and the rest was from the ingestion of soil. The soil-to-invertebrate BCF that was used for the Tier 1 approach was based on a chemical-specific regression equation derived from a combination of the approaches recommended by USEPA (2005) and Jager (1998) that resulted in a Tier 1 BCF of 15.5 and a Tier 2 BCF of 9.0. These BCFs are likely overly conservative, based on an alternative BCF value of 3.33 that is based on the geometric mean of the DDD-specific BCF values presented in Barker (1958), Davis (1968), Davis and Harrison (1966), Cramp and Olney (1967), Collett and Harrison (1968), Wheatley and Hardman (1968), Hunt and Sacho (1969), Bailey et al. (1970), Dimond et al. (1970), Gish (1970), and Beyer and Gish (1980), and assuming dry soil concentrations may be estimated using a 10 percent moisture content in sandy-loam soils (Donahue et al., 1977). This finding suggests that the initial Tier 1 BCF value of 15.5 overestimates DDD bioaccumulation by a factor of approximately 4.7. Application of this alternative BCF factor results in lowering the maximum Tier 1 EEQ from 1.2 to 0.3. Application of this alternative BCF factor results in lowering the maximum Tier 1 additive EEQ from 6.2 to 1.3.

A spatial evaluation performed for DDD shows that the two samples with elevated concentrations (above 0.006741 mg/kg) are not suggestive of a source area (**Appendix H**).

In conclusion, DDD was not considered a final COPEC for the Industrial Sub-Area because:

- The maximum EEQ (based on the use of a revised soil-to-earthworm BCF) is less than 1.0.
- All other terrestrial receptors had EEQs that were estimated to be less than 1.0.
- DDD appears to be present at the sub-area from the assumed legal application of pesticides.
- Available data do not suggest the presence of a DDD source area.

10.1.13.2 Waste Sub-Area

As the maximum DDD EEQ for terrestrial receptors for this sub-area was less than 1, and the maximum Raccoon EEQ was less than 1, DDD is not considered a final COPEC for the Waste Sub-Area.

10.1.13.3 Low Impact Sub-Area

As the maximum DDD EEQ for terrestrial receptors for this sub-area was less than 1, and the maximum Raccoon EEQ was also less than 1, DDD is not considered a final COPEC for the Low Impact Sub-Area.

10.1.14 DDT

This section summarizes all of the lines of evidence for DDT in soil presented in the Step 3 evaluation, and provides a recommendation as to whether the chemical should be carried forward to the BERA as a final COPEC. It should be noted that DDT is associated with general operations of the installation (i.e., the assumed lawful application of pesticide) (**Section 1.3.10**).

10.1.14.1 Industrial Sub-Area

DDT was not selected as a final COPEC based on findings presented below.

The maximum DDT EEQ for terrestrial receptors for this sub-area was 4.3 for the American Woodcock, based on the NOAEL Tier 1 approach. This EEQ dropped to 2.1 for the NOAEL Tier 2 approach. Other terrestrial receptors (Red-Tailed Hawk, Short-Tailed Shrew, Deer Mouse, Townsend's Big-Eared Bat, and Red Fox).had EEQs that were less than 1.0. The maximum Raccoon EEQ was also less than 1.

It should be noted that a combined DDT, DDD, and DDE EEQ for terrestrial receptors for this sub-area was 6.2 for the American Woodcock.

The evaluation of direct toxicity to earthworms and plants resulted in Tier 1 and Tier 2 EEQs that were below 1 for plants. Appropriate benchmarks were not available for earthworms (**Section 7.1.1.1**).

A geochemical analysis was not performed for DDT as it is not expected to complex with inorganic constituents. Results of the UTL and UPL comparisons showed that DDT was potentially elevated with respect to background, however, given the number of DDT soil samples collected at this sub-area compared with the background data set (170 vs. 56 samples), this finding is not unexpected. As the site data set is much larger than the background data set, the identification by chance alone of higher ambient DDT concentrations occurring on site is quite likely. The WRS test could not be run as the number of nondetect results was more than 50 percent in either the site or background data set. The box and whisker plot shows that both the median and 75th percentile concentrations are equal to the background concentrations for these two statistics.

Most (99 percent) of the estimated American Woodcock EEQ was from the ingestion of terrestrial invertebrates, and the rest was from the ingestion of soil. The soil-to-invertebrate BCF that was used for the Tier 1 approach was based on a chemical-specific regression equation derived from a combination of the approaches recommended by USEPA (2005) and Jager (1998) that resulted in a Tier 1 BCF of 16.1 and a Tier 2 BCF of 9.3. These BCFs are likely overly conservative, based on an alternative BCF value of 0.57 that is based on the geometric mean of the DDT-specific BCF values presented in Davis (1968), Davis and Harrison (1966), Wheatley and Hardman (1968), Bailey et al. (1970), Cramp and Olney (1967), and Beyer and Gish (1980) assuming dry soil concentrations may be estimated using a 10 percent moisture content in sandy-loam soils (Donahue et al., 1977). This finding suggests that the initial Tier 1 BCF value of 16.1 overestimates DDT bioaccumulation by a factor of approximately 28. Application of this alternative BCF factor results in lowering the maximum Tier 1 EEQ from 4.3 to 0.2.

A spatial evaluation (**Appendix H**) shows that elevated concentrations of DDT (three samples with a concentration greater than 0.054 mg/kg) are not indicative of a source area. However, it should be noted that some of the elevated DDT concentrations were located near buildings known to store pesticides.

In conclusion, DDT was not considered a final COPEC for the Industrial Sub-Area because:

- The maximum EEQ (based on the use of a revised soil-to-earthworm BCF) is less than 1.
- All other terrestrial receptors had EEQs that were estimated to be less than 1.0.
- No direct toxicity to plants was predicted, although earthworms do not have a readily-available toxicity screening value.
- DDT generally appears to be present at the sub-area from the assumed legal application of pesticides.

10.1.14.2 Waste Sub-Area

As the maximum DDT EEQ for terrestrial receptors for this sub-area was less than 1 and the maximum Raccoon EEQ was less than 1, DDT is not considered a final COPEC for the Waste Sub-Area. It should be noted that a maximum combined DDT, DDD, and DDE EEQ for terrestrial receptors for this sub-area was also less than 1.0.

10.1.14.3 Low Impact Sub-Area

DDT was not selected as a final COPEC based on findings presented below.

The maximum DDT EEQ for terrestrial receptors for this sub-area was 1.6 for the American Woodcock, based on the NOAEL Tier 1 approach. This EEQ dropped to less than 1 for the NOAEL Tier 2. Other terrestrial receptors (Townsend's Big-Eared Bat, Red-Tailed Hawk, Short-Tailed Shrew, Deer Mouse, and Red Fox) had EEQs that were less than 1.0. The maximum Raccoon EEQ was also less than 1.

It should be noted that a combined DDT, DDD, and DDE EEQ for terrestrial receptors for this sub-area was 2.7 for the American Woodcock.

The evaluation of direct toxicity to earthworms and plants resulted in Tier 1 and Tier 2 EEQs that were below 1 for plants. Appropriate benchmarks were not available for earthworms (**Section 7.1.1.2**).

A geochemical analysis was not performed for DDT as it is not expected to complex with inorganic constituents. Results of the UTL and UPL comparisons showed that DDT was potentially elevated with respect to background, however, given the number of DDT soil samples collected at this sub-area compared with the background data set (108 vs. 56 samples), this finding is not unexpected. As the site data set is much larger than the background data set, the identification by chance alone of higher ambient DDT concentrations occurring on site is quite likely. The WRS test could not be run as the number of nondetect results was more than 50 percent in either the site or the background data set. The box and whisker plot shows that both the median and 75th percentile concentrations are below the background concentrations for these two statistics.

Most (99 percent) of the estimated American Woodcock EEQ was from the ingestion of terrestrial invertebrates, and the rest was from the ingestion of soil. The soil-to-invertebrate BCF that was used for the Tier 1 approach was based on a chemical-specific regression equation derived from a combination of the approaches recommended by USEPA (2005) and Jager (1998) that resulted in a Tier 1 BCF of 16.1. This BCF is likely overly conservative, based on an alternative BCF value of 0.57, as discussed in **Section 10.1.14.1**. This finding suggests that the initial Tier 1 BCF value of 16.1 overestimates DDT bioaccumulation by a factor of approximately 28. Application of this alternative BCF factor results in lowering the maximum Tier 1 EEQ from 1.6 to 0.06.

A spatial evaluation shows that DDT concentrations in this sub-area are not suggestive of a source area (**Appendix H**).

In conclusion, DDT was not considered a final COPEC for the Low Impact Sub-Area because:

- The maximum EEQ (based on the use of a revised soil-to-earthworm BCF) is less than 1.

- All other terrestrial receptors had EEQs that were estimated to be less than 1.0.
- No direct toxicity to plants was predicted, although earthworms do not have a readily-available toxicity screening value.
- DDT appears to be present at the sub-area from the assumed legal application of pesticides.
- Available data do not suggest the presence of a DDT source area.

10.1.15 2,4-Dinitrotoluene

This section summarizes all of the lines of evidence for 2,4-DNT in soil presented in the Step 3 evaluation, and provides a recommendation as to whether the chemical should be carried forward to the BERA as a final COPEC. It should be noted that 2,4-DNT is known to be process related (**Section 1.3.10**).

10.1.15.1 Industrial Sub-Area

2,4-DNT was not selected as a preliminary COPEC in this sub-area (**Table 6-28**).

10.1.15.2 Waste Sub-Area

2,4-DNT was selected as a final COPEC based on findings presented below.

The maximum 2,4-DNT EEQ for terrestrial receptors for this sub-area was 735 for the Short-Tailed Shrew, based on the NOAEL Tier 1 approach. This EEQ dropped to 213 for the Tier 2 NOAEL EEQ. The maximum Raccoon EEQ was 1.2, with most of the hazard associated with exposure to soil or soil-related food items. Other terrestrial receptors also had maximum EEQs greater than 1, including an EEQ of 30 for the Red Fox and an EEQ of 4.6 for the Deer Mouse; however, the Townsend’s Big-Eared Bat and Raccoon (Louisiana Black Bear) EEQs were below 1. Avian receptors did not have EEQs estimated due to the lack of a readily-available TRV for this class of receptors.

No background evaluation was performed as 2,4-DNT is not naturally occurring or a ubiquitous anthropogenic chemical.

The majority (99 percent) of the estimated Short-Tailed Shrew EEQ was from the ingestion of terrestrial invertebrates, and the rest was from the ingestion of soil. The soil-to-invertebrate BCF that was used for the Tier 1 approach was based on a chemical-specific regression equation derived from a combination of the approaches recommended by USEPA (2005) and Jager (1998) that resulted in a Tier 1 BCF of 13.4 and a Tier 2 BCF of 7.7.

A spatial evaluation shows that five soil samples had elevated 2,4-DNT concentrations (greater than the ESV of 1.28 mg/kg) that were located within an area of approximately 100 feet by 300 feet near Site 17. Of the 82 soil samples collected at this sub-area, 2,4-DNT was detected in eleven samples, with a MDC of 4,000 mg/kg and a 95 percent UCL concentration of 101 mg/kg. It should also be noted that some samples had elevated detection limits of 110 mg/kg.

In conclusion, 2,4-DNT was considered a final COPEC for the Waste Sub-Area because:

- There were high estimated EEQs for a variety of receptors.
- TNT (the parent compound of 2,4-DNT) is a final COPEC for this sub-area
- Available data suggest the presence of a 2,4-DNT source area near Site 17.

10.1.15.3 Low Impact Sub-Area

As 2,4-DNT EEQ was not selected as an initial COPEC in this sub-area, 2,4-DNT is not considered a final COPEC for the Low Impact Sub-Area.

10.1.16 2,6-Dinitrotoluene

This section summarizes all of the lines of evidence for 2,6-DNT in soil presented in the Step 3 evaluation, and provides a recommendation as to whether the chemical should be carried forward to the BERA as a final COPEC. It should be noted that 2,6-DNT is known to be process related (**Section 1.3.10**).

10.1.16.1 Industrial Sub-Area

2,6-DNT was not selected as a preliminary COPEC in this sub-area (**Table 6-28**).

10.1.16.2 Waste Sub-Area

2,6-DNT was selected as a final COPEC based on findings presented below.

The maximum 2,6-DNT EEQ for terrestrial receptors for this sub-area was 99 for the Short-Tailed Shrew, based on the NOAEL Tier 1 approach. This EEQ dropped to 30 for the Tier 2 NOAEL EEQ. The maximum Raccoon EEQ was 2.1, with most of the hazard associated with exposure to soil or soil-related food items. Other terrestrial receptors also had maximum EEQs greater than 1, including an EEQ of 3.9 for the Red Fox and an EEQ of 8.8 for the Deer Mouse; however, the Townsend's Big-Eared Bat and Raccoon (Louisiana Black Bear) EEQs were below 1. Avian receptors did not have EEQs estimated due to the lack of a readily-available TRV for this class of receptors.

No background evaluation was performed as 2,6-DNT is not naturally occurring or a ubiquitous anthropogenic chemical.

The majority (99 percent) of the estimated Short-Tailed Shrew EEQ was from the ingestion of terrestrial invertebrates, and the rest was from the ingestion of soil. The soil-to-invertebrate BCF that was used for the Tier 1 approach was based on a chemical-specific regression equation derived from a combination of the approaches recommended by USEPA (2005) and Jager (1998) that resulted in a Tier 1 BCF of 13.4 and a Tier 2 BCF of 7.7.

A spatial evaluation was not performed for 2,6-DNT, as its spatial pattern is expected to be similar to 2,4-DNT and TNT.

In conclusion, 2,6-DNT was considered a final COPEC for the Waste Sub-Area because:

- There were high estimated EEQs for a variety of receptors.
- TNT (the parent compound of 2,6-DNT) is a final COPEC for this sub-area.
- Available data suggest the presence of 2,6-DNT's parent compound TNT has a source area near Site 17.

10.1.16.3 Low Impact Sub-Area

As 2,6-DNT was not selected as an initial COPEC in this sub-area, 2,6-DNT is not considered a final COPEC for the Low Impact Sub-Area.

10.1.17 Hexachlorobenzene

This section summarizes all of the lines of evidence for HCB in soil presented in the Step 3 evaluation, and provides a recommendation as to whether the chemical should be carried forward to the BERA as a final COPEC. It should be noted that HCB is known to be process related (**Section 1.3.10**).

10.1.17.1 Industrial Sub-Area

As the maximum HCB EEQ for terrestrial receptors for this sub-area was less than 1 and the maximum Raccoon EEQ was also less than 1, HCB is not considered a final COPEC for the Industrial Sub-Area. It should be noted that there are no direct contact toxicity screening values available for HCB.

10.1.17.2 Waste Sub-Area

HCB was not selected as a final COPEC based on findings presented below.

The maximum HCB EEQ for terrestrial receptors for this sub-area was 2.3 for the Short-Tailed Shrew, based on the NOAEL Tier 1 approach. This EEQ dropped to less than 1 for the NOAEL Tier 2 approach. The Deer Mouse had an EEQ of 1.9, and the Raccoon, Townsend's Big-Eared

Bat, and Red Fox had estimated EEQs less than 1. Red-Tailed Hawk and American Woodcock EEQs could not be estimated due to the lack of a readily-available avian TRV.

A geochemical analysis was not performed for HCB as it is not expected to complex with inorganic constituents. Background comparisons were not performed because HCB is not expected to be background related.

Most (99 percent) of the estimated Short-Tailed Shrew EEQ was from the ingestion of terrestrial invertebrates, and the rest was from the ingestion of soil. The soil-to-invertebrate BCF that was used for the Tier 1 approach was based on a chemical-specific regression equation derived from a combination of the approaches recommended by USEPA (2005) and Jager (1998) that resulted in a Tier 1 BCF of 15.5 and a Tier 2 BCF of 9.0.

The mammalian TRV used for HCB was 0.08 mg/kg-day based on liver effects observed during a rat study (Arnold et al., 1985) presented in USEPA's Integrated Risk Information System (IRIS) data base (2004). An alternative TRV of 1.6 mg/kg-day is presented in USEPA (1999a) based on reproductive effects observed in a chronic rat study. As reproductive effects are more important for ecological receptors (compared with other effects used for human health in the IRIS data base), this alternative TRV suggests hazards were overestimated by a factor of 20-fold. Use of this alternative TRV would reduce the maximum EEQ from 2.3 to 0.11.

A spatial evaluation performed for HCB shows that the two samples with detections (out of the 42 collected) are not located near each other and are, therefore, not suggestive of a potential source area (**Appendix H**).

In conclusion, HCB was not considered a final COPEC for the Waste Sub-Area because:

- The maximum EEQ (based on the use of a revised TRV) is less than 1.0.
- All other terrestrial receptors had EEQs that were estimated to be less than 1.0.
- The HCB frequency of detection in soil was very low (less than 5 percent).
- Available data do not suggest the presence of a HCB source area.

10.1.17.3 Low Impact Sub-Area

As the maximum HCB EEQ for terrestrial receptors for this sub-area was less than 1 and the maximum Raccoon EEQ was also less than 1, HCB is not considered a final COPEC for the Low Impact Sub-Area. It should be noted that there are no direct contact toxicity screening values available for HCB.

10.1.18 HMX

This section summarizes all of the lines of evidence for HMX in soil presented in the Step 3 evaluation, and provides a recommendation as to whether the chemical should be carried forward to the BERA as a final COPEC. It should be noted that HMX is known to be process related (**Section 1.3.10**).

10.1.18.1 Industrial Sub-Area

HMX was not selected as a preliminary COPEC in this sub-area (**Table 6-28**).

10.1.18.2 Waste Sub-Area

HMX was not selected as a final COPEC based on findings presented below.

The maximum HMX EEQ for terrestrial receptors for this sub-area was 1.9 for the Short-Tailed Shrew, based on the NOAEL Tier 1 approach. This EEQ dropped to less than 1 for the NOAEL Tier 2 approach. The Deer Mouse (1.4) was the only other terrestrial receptor with an EEQ greater than 1. The Townsend's Big-Eared Bat and Red Fox had EEQs less than 1. The maximum Raccoon EEQ was also less than 1.0. Red-Tailed Hawk and American Woodcock EEQs could not be estimated due to the lack of a readily-available avian TRV.

The evaluation of direct toxicity to earthworms and plants resulted in Tier 1 and Tier 2 EEQs that were below 1 for earthworms. Appropriate benchmarks were not available for plants (**Section 7.1.1.3**).

A geochemical analysis was not performed for HMX as it is not expected to complex with inorganic constituents. Background comparisons were not performed because HMX is not expected to be background related.

Nearly all (99 percent) of the estimated Short-Tailed Shrew EEQ was from the ingestion of terrestrial invertebrates, and the rest was from the ingestion of soil. The soil-to-invertebrate BCF that was used for the Tier 1 approach was based on a chemical-specific regression equation derived from a combination of the approaches recommended by USEPA (2005) and Jager (1998) that resulted in a Tier 1 BCF of 12.7 and a Tier 2 BCF of 7.3.

The mammalian TRV used for HMX was derived from a LOAEL endpoint of 5.0 mg/kg-day to obtain a NOAEL of 1.0 mg/kg-day from acute effects observed during a rabbit study (Cuthbert et al., 1985) presented in USACHPPM (2000). An alternative NOAEL-based TRV of 30 mg/kg-day is available, from information presented in Talmage et al. (1999) based on hepatic effects, renal effects, and mortality observed in 13-week rat and mouse studies. As TRVs derived from 13-week studies are more useful and avoid the use of large UFs associated with deriving TRVs from acute studies, this alternative TRV suggests hazards were overestimated in the LHAAP

Screening Level Ecological Risk Assessment (SLERA) by a factor of 30-fold. Use of this alternative TRV would reduce the maximum EEQ from 1.9 to 0.06.

A spatial evaluation performed for HMX shows that of the seven samples detected out of the 70 collected, only three with elevated concentrations above 1.3 mg/kg are located near each other by approximately 300 feet and, therefore, are not overly suggestive of a potential source area (**Appendix H**).

In conclusion, HMX was not considered a final COPEC for the Waste Sub-Area because:

- The maximum EEQ (based on the use of a revised TRV) is less than 1.
- All other terrestrial receptors would be expected to have revised EEQs that are below 1.0.
- Available data do not suggest the presence of a HMX source area.

10.1.18.3 Low Impact Sub-Area

As HMX was not selected as an initial COPEC in this sub-area, HMX is not considered a final COPEC for the Low Impact Sub-Area.

10.1.19 Pentachlorophenol

This section summarizes all of the lines of evidence for pentachlorophenol in soil presented in the Step 3 evaluation, and provides a recommendation as to whether the chemical should be carried forward to the BERA as a final COPEC. It should be noted that pentachlorophenol is not known to be process related (**Section 1.3.10**).

10.1.19.1 Industrial Sub-Area

Pentachlorophenol was not selected as a preliminary COPEC in this sub-area (**Table 6-28**).

10.1.19.2 Waste Sub-Area

Pentachlorophenol was not selected as a preliminary COPEC in this sub-area (**Table 6-28**).

10.1.19.3 Low Impact Sub-Area

Pentachlorophenol was not selected as a final COPEC based on findings presented below.

The maximum pentachlorophenol EEQ for terrestrial receptors for this sub-area was 3.6 for the Short-Tailed Shrew, based on the NOAEL Tier 1 approach. This EEQ dropped to 1.5 for the NOAEL Tier 2 approach. The Deer Mouse (1.2) was the only other terrestrial receptor with an EEQ greater than 1.

The evaluation of direct toxicity to earthworms and plants resulted in Tier 1 and Tier 2 EEQs that were below 1 for both of these receptors (**Section 7.1.1.2**).

A geochemical analysis was not performed for pentachlorophenol as it is not expected to complex with inorganic constituents. Background comparisons were not performed because pentachlorophenol is not expected to be background related.

Nearly all (99 percent) of the estimated Short-Tailed Shrew EEQ was from the ingestion of terrestrial invertebrates, and the rest was from the ingestion of soil. The soil-to-invertebrate BCF that was used for the Tier 1 approach was based on a chemical-specific regression equation derived from a combination of the approaches recommended by USEPA (2005) and Jager (1998) that resulted in a Tier 1 BCF of 14.9 and a Tier 2 BCF of 8.6.

The mammalian TRV used for the evaluation of pentachlorophenol in the food chain model was derived from a NOAEL endpoint to obtain a NOAEL of 0.24 mg/kg-day from survival and growth effects observed during an approximate 15-week rat reproduction study (Schwetz et al., 1978) presented in Sample et al., 1996). An alternative NOAEL-based TRV of 8.42 mg/kg-day is available from information presented in LANL (2005), based on studies that evaluated eight reproductive endpoints and 17 growth endpoints. These studies evaluated by LANL had EDs ranging up to 36 weeks and included ages from gestation through juvenile. LANL (2005) also reviewed the Schwetz TRV of 0.24 mg/kg-day and determined that its use for estimating exposure and toxicity to pentachlorophenol in soil was not recommended. Use of the alternative TRV of 8.42 mg/kg-day suggests hazards were overestimated in the LHAAP SLERA by a factor of 35-fold. Use of this alternative TRV would reduce the maximum EEQ from 3.6 to 0.1.

A spatial evaluation performed for pentachlorophenol shows that of the six samples detected out of the 143 collected, none are located near each other (the closest two are approximately 440 feet apart) and, therefore, the data are not suggestive of a potential source area (**Appendix H Figure H-104**).

In conclusion, pentachlorophenol was not considered a final COPEC for the Low Impact Sub-Area because:

- The maximum EEQ (based on the use of a revised TRV) is less than 1.
- All other terrestrial receptors would have revised EEQs that are below 1.0.
- No direct contact hazards for plants or invertebrates were determined.
- Available data do not suggest the presence of a pentachlorophenol source area.

10.1.20 Perchlorate

This section summarizes all of the lines of evidence for perchlorate in soil presented in the Step 3 evaluation, and provides a recommendation as to whether the chemical should be carried forward to the BERA as a final COPEC. It should be noted that perchlorate is known to be process related (**Section 1.3.10**).

10.1.20.1 Industrial Sub-Area

Perchlorate was selected as a final COPEC based on findings presented below.

The maximum perchlorate EEQs for all terrestrial receptors for this sub-area were below 1. These results are based on the use of perchlorate TRVs for mammals and birds derived from the primary literature (**Appendix J-2**). There is some uncertainty associated with these TRVs, as they have not undergone peer review by a third party.

A geochemical analysis was not performed for perchlorate as it is not expected to complex with inorganic constituents.

The Townsend's Big-Eared Bat experienced the highest (modeled) dose of perchlorate of all of the measurement receptors due to the assumption that a 1:1 relationship exists between the perchlorate concentrations of its prey (100 percent moths) and the plants that the moths are assumed to feed on. The soil-to-plant BCF that was used for the Tier 1 approach was based on data from Sample et al. (2005) that presented a chemical-specific regression equation and resulted in a BCF of 6.4 for the Industrial Sub-Area soil (0 to 0.5 feet).

A spatial evaluation shows that elevated concentrations of perchlorate greater than or equal to 1.45 mg/kg were often seen occurring in distinct areas, suggesting several possible source areas (**Appendix H**).

In conclusion, perchlorate was considered a final COPEC for the Industrial Sub-Area because:

- There is uncertainty associated with perchlorate's toxicity and uptake. Due to these uncertainties, at the time the BERA Field Sampling Work Plan (Shaw, 2006b) was prepared, perchlorate was selected as a final COPEC for evaluation in the BERA field sampling program.
- Available data suggest the presence of one or more perchlorate source areas.

10.1.20.2 Waste Sub-Area

Perchlorate was not selected as a final COPEC because all estimated receptor EEQs were less than 1 and there was no evidence of a perchlorate source area.

10.1.20.3 Low Impact Sub-Area

Perchlorate was not selected as a final COPEC because all estimated receptor EEQs were less than 1 and there was no evidence of a perchlorate source area.

10.1.21 2,3,7,8-TCDD TEQ

This section summarizes all of the lines of evidence for 2,3,7,8-TCDD in soil presented in the Step 3 evaluation, and provides a recommendation as to whether the chemical should be carried forward to the BERA as a final COPEC. It should be noted that there are no known sources of dioxin as a result of LHAAP processes or application (**Section 1.3.10**). Chlorinated organics, such as dioxin, are produced through natural as well as man-made processes. Significant amounts of dioxin are produced by nature in peat bogs, during volcanic eruptions, from forest fires, or wherever compounds containing hydrogen, carbon, and chlorine are burned. Forest fires may be the single largest source of dioxin in the environment (Gribble, 1994). More than half of the total area at LHAAP has been subjected to controlled burns to limit vegetation growth since 1975 (Lanis Rieger, Installation Forester, personal communication).

10.1.21.1 Industrial Sub-Area

2,3,7,8-TCDD TEQ was not selected as a final COPEC based on findings presented below; however, it is retained on the background list for consideration by risk managers in Step 7.

The maximum 2,3,7,8-TCDD TEQ EEQ for terrestrial receptors for this sub-area was 18.3 for the Short-Tailed Shrew, based on the NOAEL Tier 1 approach. This EEQ dropped to 7 for the NOAEL Tier 2 approach. Other terrestrial receptors had the following EEQs: Deer Mouse (9.7), American Woodcock (1.8), with the Red-Tailed Hawk, Townsend's Big-Eared Bat, and Red Fox having EEQs less than 1.0. The Raccoon and Raccoon (Louisiana Black Bear) EEQs were 5.5 and 3.2, respectively; however, only approximately 29 percent of these hazards were from soil exposure (i.e., terrestrial invertebrate ingestion).

A geochemical analysis was not performed for 2,3,7,8-TCDD TEQ as it is not expected to complex with inorganic constituents. Results of the UTL and UPL comparisons showed that 2,3,7,8-TCDD TEQ was potentially elevated with respect to background, however, given the number of 2,3,7,8-TCDD soil samples collected at this sub-area compared with the background data set (90 vs. 56 samples), this finding is not unexpected. As the site data set is much larger than the background data set, the identification by chance alone of higher ambient concentrations of 2,3,7,8-TCDD TEQ occurring on site is quite likely.

The WRS test results showed that 2,3,7,8-TCDD TEQ was not elevated with respect to background. The box and whisker plot shows that both the median and 75th percentile concentrations are above the background concentrations for these two statistics. Additional information on individual TCDD congeners is provided in **Appendix F**.

Almost all (99 percent) of the estimated Short-Tailed Shrew EEQ was from the ingestion of terrestrial invertebrates, and the rest was from the ingestion of soil. The soil-to-invertebrate BCF that was used for the Tier 1 approach was based on field data from Sample et al. (1998) that presented a 90^{th} percentile BCF of 22.2. However, Sample et al. (1998 and 1999) present a 2,3,7,8-TCDD soil-to-earthworm regression equation, based on nineteen samples, an r^2 of 0.94, and a P = 0.0001, as follows:

$$\ln \text{earthworm concentration} = 1.182 (\ln[\text{soil concentration}]) + 3.533$$

It is more appropriate to use a BCF regression equation as compared with a BCF point value, as BCFs are not expected to remain constant over varying COPEC concentrations. Use of this regression equation and the Tier 1 2,3,7,8-TCDD TEQ soil concentration of 7.62E-06 mg/kg for the Short-Tailed Shrew results in an estimated earthworm concentration of 3.05E-05 mg/kg, and a BCF of 4.0. This finding suggests that the initial Tier 1 BCF value of 22.2 overestimates bioaccumulation by a factor of approximately 5.6. Application of this alternative BCF factor results in lowering the maximum Tier 1 EEQ from 18.3 to 3.3.

It is also important to note that the TEFs used to estimate each congener's TEQ were very conservatively selected. Three TEFs were available for each congener, a mammal TEF, an avian TEF, and a fish TEF, and the greatest TEF was selected for use in Step 3. Four TEFs that were used for mammal receptors like the Short-Tailed Shrew and the Deer Mouse were based on either avian or fish receptors, and overestimated the TEQ by up to 10-fold, as shown below:

TCDD Congener	Mammal TEF	Non-Mammal TEF Used In Step 3 ERA	Overestimation of Mammal TCDD TEQ
1,2,3,4,7,8-HxCDD	0.1	0.5	5
2,3,7,8-TCDF	0.1	1.0	10
1,2,3,7,8-PeCDF	0.05	0.1	2
2,3,4,7,8-PeCDF	0.5	1	2

Similarly, three TEFs that were used for avian receptors like the American Woodcock were based on either mammal or fish receptors, and overestimated the TEQ by 10-fold, as shown below:

TCDD Congener	Avian TEF	Non-Avian TEF Used In Step 3 ERA	Overestimation of Avian TCDD TEQ
1,2,3,4,7,8-HxCDD	0.05	0.5	10
1,2,3,6,7,8-HxCDD	0.01	0.1	10
1,2,3,4,6,7,8-HpCDD	0.001	0.01	10

A spatial evaluation shows that elevated concentrations of 2,3,7,8-TCDD TEQ greater than or equal to 1.8E-05 mg/kg were generally isolated and not indicative of a source area (**Appendix H**).

In conclusion, 2,3,7,8-TCDD TEQ was not considered a final COPEC for the Industrial Sub-Area because:

- Using a revised soil-to-earthworm BCF, all terrestrial receptors except the Short Tailed Shrew (EEQ = 3.3) are expected to have revised EEQs that are less than 1.
- Results of the WRS test showed that 2,3,7,8-TCDD TEQ was not elevated with respect to background.
- Available data do not suggest the presence of a 2,3,7,8-TCDD TEQ source area.

2,3,7,8-TCDD TEQ is retained on the background list for consideration by risk managers in Step 7.

10.1.21.2 Waste Sub-Area

2,3,7,8-TCDD TEQ was selected as a final COPEC based on findings presented below.

The maximum 2,3,7,8-TCDD TEQ EEQ for terrestrial receptors for this sub-area was 82 for the Short-Tailed Shrew, based on the NOAEL Tier 1 approach. This EEQ dropped to 25 for the NOAEL Tier 2 approach. Other terrestrial receptors had the following EEQs greater than 1: Deer Mouse (76) and American Woodcock (14). Townsend's Big-Eared Bat, the Red Fox, and the Red-Tailed Hawk had EEQs less than 1.0. The maximum Raccoon EEQ was 19 and the maximum Raccoon (Louisiana Black Bear) EEQ was 2.7, with approximately 65 percent of these hazards from soil exposure (i.e., terrestrial invertebrate ingestion).

A geochemical analysis was not performed for 2,3,7,8-TCDD TEQ as it is not expected to complex with inorganic constituents. Results of the UTL and UPL comparisons, and the WRS test, showed that 2,3,7,8-TCDD TEQ was potentially elevated with respect to background. However, results of the WRS test for the driver congener 1,2,3,4,6,7,8-heptachlorodibenzo-p-dioxin (HpCDD) (see below) showed that it was not elevated with respect to background. The number of 2,3,7,8-TCDD soil samples collected at this sub-area was lower than that collected for the background data set (15 vs. 56 samples). The box and whisker plot for 2,3,7,8-TCDD TEQ shows that both the median and 75th percentile concentrations are above the background concentrations for these two statistics. Additional information on individual TCDD congeners is provided in **Appendix F**.

It is important to note that 2,3,7,8-TCDD TEQs were estimated by assuming that each of the 17 congeners not detected in a sample were present at half the detection limit. This approach may have overestimated the TEQ for some samples. For the Waste Sub-Area, the soil sample with the greatest TEQ concentration was 17SD12 (TEQ = 1.98E-04 mg/kg), and in this sample the congener contributing the most to the final TEQ was 1,2,3,4,6,7,8-HpCDD (approximately 60 percent) and this congener was detected. However, the next two samples with the greatest TEQ concentrations were 16WW35 and 17SS26 (TEQs = 4.57E-05 and 1.76E-05 mg/kg, respectively), and in these samples the congeners contributing the most to the TEQ were nondetected (1,2,3,6,7,8- hexachlorodibenzo-p-dioxin [HxCDD], 1,2,3,7,8,9-HxCDD, and 2,3,7,8-tetrachlorodibenzofuran [TCDF]). Because they were nondetected, half the detection limit was used in the estimation of the TEQ, thereby likely overestimating the TEQ.

It is also important to note that the TEFs used to estimate each congener's TEQ were very conservatively selected. Three TEFs were available for each congener, a mammal TEF, an avian TEF, and a fish TEF, and the greatest TEF was selected for use in Step 3. Four TEFs that were used for mammal receptors like the Short-Tailed Shrew and the Deer Mouse were based on either avian or fish receptors, and overestimated the TEQ by up to 10-fold, as shown below:

TCDD Congener	Mammal TEF	Non-Mammal TEF Used In Step 3 ERA	Overestimation of Mammal TCDD TEQ
1,2,3,4,7,8-HxCDD	0.1	0.5	5
2,3,7,8-TCDF	0.1	1.0	10
1,2,3,7,8-PeCDF	0.05	0.1	2
2,3,4,7,8-PeCDF	0.5	1	2

Similarly, three TEFs that were used for avian receptors like the American Woodcock were based on either mammal or fish receptors, and overestimated the TEQ by 10-fold, as shown below:

TCDD Congener	Avian TEF	Non-Avian TEF Used In Step 3 ERA	Overestimation of Avian TCDD TEQ
1,2,3,4,7,8-HxCDD	0.05	0.5	10
1,2,3,6,7,8-HxCDD	0.01	0.1	10
1,2,3,4,6,7,8-HpCDD	0.001	0.01	10

Most (99 percent) of the estimated Short-Tailed Shrew EEQ was from the ingestion of terrestrial invertebrates, and the rest was from the ingestion of soil. The soil-to-invertebrate BCF that was used for the Tier 1 approach was based on field data from Sample et al. (1998) that presented a 90^{th} percentile BCF of 22.2. However, Sample et al. (1998 and 1999) presents a 2,3,7,8-TCDD soil-to-earthworm regression equation, based on 19 samples, an r^2 of 0.94, and a P = 0.0001, as follows:

ln earthworm concentration = 1.182 (ln[soil concentration]) + 3.533

It is more appropriate to use a BCF regression equation as compared with a BCF point value, as BCFs are not expected to remain constant over varying COPEC concentrations. Use of this regression equation and the Tier 1 2,3,7,8-TCDD TEQ soil concentration of 3.4E-05 mg/kg results in an estimated earthworm concentration of 1.8E-04 mg/kg, and a BCF of 5.3. This finding suggests that the initial Tier 1 BCF value of 22.2 overestimates bioaccumulation by a factor of approximately 4.2. Application of this alternative BCF factor results in lowering the maximum Tier 1 EEQ from 82 to 20.

A spatial evaluation shows that four samples with elevated concentrations of 2,3,7,8-TCDD TEQ greater than or equal to 5E-06 mg/kg were located within an area of approximately 100 feet by 300 feet near Site 17 (**Appendix H**), suggesting an area of elevated concentrations near this site.

In conclusion, 2,3,7,8-TCDD TEQ was considered a final COPEC for the Waste Sub-Area because:

- NOAEL-based EEQs, based on revised soil-to-earthworm BCFs for the Short-Tailed Shrew, were considerably above 1.0.
- Other terrestrial receptors had EEQs that were estimated to be above 1.0.
- Results of the UTL and UPL comparisons, and the WRS test, showed that 2,3,7,8-TCDD TEQ was elevated with respect to background.
- The 2,3,7,8-TCDD TEQ concentration in soil is driven by detected concentrations of congeners with elevated TEFs rather than the use of surrogate concentrations for non-detects.
- 2,3,7,8-TCDD TEQ concentrations are elevated in an area near Site 17**.**

10.1.21.3 Low Impact Sub-Area

2,3,7,8-TCDD TEQ was not selected as a final COPEC based on findings presented below.

The maximum 2,3,7,8-TCDD TEQ EEQ for terrestrial receptors for this sub-area was 9.5 for the Short-Tailed Shrew, based on the NOAEL Tier 1 approach. This EEQ dropped to 3.8 for the NOAEL Tier 2 approach. The Deer Mouse also had a Tier 1 EEQ greater than 1 (4.1). The American Woodcock, Red-Tailed Hawk, Townsend’s Big-Eared Bat, and the Red Fox had EEQs less than 1.0. The maximum Raccoon EEQ was 4.6 and the Raccoon (Louisiana Black Bear) EEQ was 2.7; however, only approximately 15 percent of these hazards were from soil exposure (i.e., terrestrial invertebrate ingestion).

A geochemical analysis was not performed for 2,3,7,8-TCDD TEQ as it is not expected to complex with inorganic constituents. Results of the UTL and UPL comparisons, and the WRS test, showed that 2,3,7,8-TCDD TEQ was potentially elevated with respect to background. The number of 2,3,7,8-TCDD soil samples collected at this sub-area was lower than that collected for the background data set (10 vs. 56 samples). The box and whisker plot shows that both the median and 75th percentile concentrations are above the background concentrations for these two statistics. Additional information on individual TCDD congeners is provided in **Appendix F**.

Most (99 percent) of the estimated Short-Tailed Shrew EEQ was from the ingestion of terrestrial invertebrates, and the rest was from the ingestion of soil. The soil-to-invertebrate BCF that was used for the Tier 1 approach was based on field data from Sample et al. (1998) that presented a 90th percentile BCF of 22.2. However, Sample et al. (1998 and 1999) present a 2,3,7,8-TCDD soil-to-earthworm regression equation based on 19 samples, an r^2 of 0.94, and a P = 0.0001, as follows:

$$\ln \text{earthworm concentration} = 1.182 (\ln[\text{soil concentration}]) + 3.533$$

It is more appropriate to use a BCF regression equation as compared with a BCF point value, as BCFs are not expected to remain constant over varying COPEC concentrations. Use of this regression equation and the Tier 1 2,3,7,8-TCDD TEQ soil concentration of 3.95E-06 mg/kg results in an estimated earthworm concentration of 1.4.E-05 mg/kg and a BCF of 3.6. This finding suggests that the Tier 1 BCF value of 22.2 initially used overestimates bioaccumulation by a factor of approximately 6.2. Application of this alternative BCF factor results in lowering the maximum Tier 1 EEQ from 9.5 to 1.5.

A spatial evaluation shows that two elevated concentrations of 2,3,7,8-TCDD TEQ greater than or equal of 4E-06 mg/kg are isolated and not indicative of a source area (**Appendix H**).

In conclusion, 2,3,7,8-TCDD TEQ was not considered a final COPEC for the Low Impact Sub-Area because:

- The NOAEL-EEQ, based on a revised soil-to-earthworm BCF for the Short-Tailed Shrew, is 1.5 (very close to 1.0).
- All other terrestrial receptors are expected to have revised EEQs that are less than 1.
- Available data do not suggest the presence of a 2,3,7,8-TCDD TEQ source area.

10.1.22 1,3,5-Trinitrobenzene

This section summarizes all of the lines of evidence for 1,3,5-TNB in soil presented in the Step 3 evaluation, and provides a recommendation as to whether the chemical should be carried forward to the BERA as a final COPEC. It should be noted that TNB is known to be process related (**Section 1.3.10**).

10.1.22.1 Industrial Sub-Area

TNB was not selected as a preliminary COPEC in this sub-area (**Table 6-28**).

10.1.22.2 Waste Sub-Area

TNB was not selected as a final COPEC based on findings presented below.

The maximum TNB EEQ for terrestrial receptors for this sub-area was 9 for the Short-Tailed Shrew, based on the NOAEL Tier 1 approach. This EEQ dropped to 3.9 for the NOAEL Tier 2 approach. The Deer Mouse had a maximum EEQ of 3.2 and the Townsend's Big-Eared Bat and Red Fox EEQs were less than 1.0. The maximum Raccoon EEQ was 1.2 and the maximum Raccoon (Louisiana Black Bear) EEQ was 0.2, with approximately 72 percent of the hazard estimated from the ingestion of TNB that had bioaccumulated in terrestrial plants and 26 percent from the ingestion of soil invertebrates. Red-Tailed Hawk and American Woodcock EEQs could not be estimated due to the lack of a readily-available avian TRV.

A geochemical analysis was not performed for TNB as it is not expected to complex with inorganic constituents. Background comparisons were not performed because TNB is not expected to be background related.

Most (99 percent) of the estimated Short-Tailed Shrew EEQ was from the ingestion of terrestrial invertebrates, and the rest was from the ingestion of soil. The soil-to-invertebrate BCF that was used for the Tier 1 approach was based on a chemical-specific regression equation derived from a combination of the approaches recommended by USEPA (2005) and Jager (1998) that resulted in a Tier 1 BCF of 13.1 and a Tier 2 BCF of 7.5. USEPA (1999a) does not have a soil-to-invertebrate BCF for TNB but does present a value of 1.19 for a close surrogate (1,3-DNB). This alternative BCF value suggests the Tier 1 bioaccumulation may have been overestimated by 11-fold. Use of this alternative BCF would reduce the maximum Short-Tailed Shrew EEQ of 9 to 0.8.

The mammalian TRV used for TNB was 2.68 mg/kg-day based on a reduction in body weight observed during a rat study (Kinkead et al., 1994) presented in USACHPPM's Army Risk Assessment Modeling System (ARAMS) Terrestrial Toxicity Data Base (2002). As a reduction in body weight may not actually result in either lower reproduction or a decline in the population, the use of this TRV is likely overly conservative.

A spatial evaluation performed for TNB shows that three samples with elevated concentrations (equal to or above 150 mg/kg) are within 100 to 300 feet of each other near Site 17, suggestive of a potential source area (**Appendix H**). It should be noted that although the spatial plot figure in **Appendix H** shows five samples with concentrations greater than 14.7 mg/kg, only three of these have concentrations equal to or above 150 mg/kg.

It should be noted that TNB was detected in 11 out of 70 total soil samples, resulting in a frequency of detection of only 16 percent. It should also be noted that of these 11 samples, only three (17SB06, 17SB02, and 17SB04) had concentrations equal to or greater than 150 mg/kg.

Based on these findings, TNB is not considered a final COPEC for the Waste Sub-Area, principally because the maximum EEQ (based on the use of a revised soil-to-earthworm BCF) is less than 1 for the Short-Tailed Shrew, all the other terrestrial receptors would be expected to have revised EEQs that are below 1, and the TRV critical effect (i.e., body weight change) may not adversely affect small mammal populations.

In conclusion, TNB was not considered a final COPEC for the Waste Sub-Area because:

- The maximum EEQ (based on the use of a revised soil-to-earthworm BCF) was less than 1 for the Short-Tailed Shrew.
- All other terrestrial receptors are expected to have revised EEQs that are less than 1.
- The TRV critical effect (i.e., body weight change) may not adversely affect small mammal populations.

10.1.22.3 Low Impact Sub-Area

TNB was not selected as a preliminary COPEC in this sub-area (**Table 6-28**).

10.1.23 2,4,6-Trinitrotoluene

This section summarizes all of the lines of evidence for TNT in soil presented in the Step 3 evaluation, and provides a recommendation as to whether the chemical should be carried forward to the BERA as a final COPEC. It should be noted that TNT is known to be process related (**Section 1.3.10**).

10.1.23.1 Industrial Sub-Area

TNT was not selected as a preliminary COPEC in this sub-area (**Table 6-28**).

10.1.23.2 Waste Sub-Area

TNT was selected as a final COPEC based on findings presented below.

The maximum TNT EEQ for terrestrial receptors for this sub-area was 11,600 for the American Woodcock, based on the NOAEL Tier 1 approach. This EEQ dropped to 3, 400 for the Tier 2

NOAEL EEQ. The maximum Raccoon EEQ was 283 and the maximum Raccoon (Louisiana Black Bear) EEQ was 40, with approximately 87 percent of the hazards from the ingestion of terrestrial invertebrates and the rest from the ingestion of plants and soil. Other terrestrial receptors also had maximum EEQs greater than 1, including an EEQ of 2,070 for the Short-Tailed Shrew, 1,560 for the Deer Mouse, 22 for the Townsend's Big-Eared Bat, 95 for the Red-Tailed Hawk, and 70 for the Red Fox.

TNT concentrations in soil were suggestive of potential toxicity to earthworms and plants (**Section 7.1.1.3**).

No background evaluation was performed as TNT is not naturally occurring or a ubiquitous anthropogenic chemical.

The majority (99 percent) of the estimated American Woodcock EEQ was from the ingestion of terrestrial invertebrates, and the rest was from the ingestion of soil. The soil-to-invertebrate BCF that was used for the Tier 1 approach was based on a chemical-specific regression equation derived from a combination of the approaches recommended by USEPA (2005) and Jager (1998) that resulted in a Tier 1 BCF of 13.3 and a Tier 2 BCF of 7.7.

A spatial evaluation shows that five soil samples had elevated TNT concentrations (greater than the ESV of 30 mg/kg) that were located within an area of approximately 100 feet by 300 feet near Site 17 **(Appendix H)**. Of the 70 soil samples collected at this sub-area, TNT was detected in 11 samples, with a MDC of 10,000 mg/kg and a 95 percent UCL concentration of 287 mg/kg. It should also be noted that some samples had elevated detection limits of 110 mg/kg.

In conclusion, TNT was considered a final COPEC for the Waste Sub-Area because:

- There were high estimated EEQs for a variety of receptors.
- Available data suggest the presence of a TNT source area near Site 17.

10.1.23.3 Low Impact Sub-Area

TNT was not selected as a preliminary COPEC in this sub-area (**Table 6-28**).

10.2 Sediment

This section presents sediment COPECs, as defined previously in **Section 10.0**. To identify EEQs in sediment, food chain model results for the aquatic receptors (Belted Kingfisher, Muskrat, River Otter, and Bank Swallow) are used (**Tables 7-26** through **7-33**). Results from the Raccoon (as well as the Raccoon [Louisiana Black Bear]), a facultative terrestrial and aquatic species, are also considered. Direct contact and fish CBR HQs are also discussed, as well as a comparison to actual measured fish tissue concentrations (**Section 8.0**). Because exposure for all receptors is modeled separately for each possible sub-area/watershed combination (e.g., Goose Prairie Creek runs through the Low Impact Sub-Area and the Industrial Sub-Area, total exposure to COPECs in this watershed is estimated by reviewing results from both sub-areas). EEQs presented in this section are for the most exposed watershed and sub-area combination.

10.2.1 Aluminum

This section summarizes all of the lines of evidence for aluminum in sediment presented in the Step 3 evaluation, and provides a recommendation as to whether the chemical should be carried forward to the BERA as a final COPEC. It should be noted that aluminum is known to be process related (**Section 1.3.10**).

10.2.1.1 Goose Prairie Creek

Aluminum was not selected as a final COPEC based on findings presented below; however, it is retained on the background list for consideration by risk managers in Step 7.

The maximum aluminum EEQ for aquatic receptors for this watershed was 38 for the Muskrat, based on the NOAEL Tier 1 approach. Other aquatic receptors had the following EEQs: River Otter (21); Bank Swallow (18); and Belted Kingfisher (8.1). The maximum Raccoon EEQ was 206 and the maximum Raccoon (Louisiana Black Bear) EEQ was 113. For all these receptors, more than 90 percent of the hazard was associated with sediment exposure (ether aquatic invertebrate ingestion or sediment ingestion). For the Raccoon and Raccoon (Louisiana Black Bear), the maximum EEQs were reduced to 179 and 97, respectively, for the NOAEL Tier 2 approach.

For the direct contact assessment and CBR evaluation, none of the available evaluation criteria suggested adverse ecological impacts to aquatic receptors (**Tables 7-10** and **7-15**). Although measured aluminum concentrations in catfish collected from Goose Prairie Creek Watershed portion of Caddo Lake were greater than modeled concentrations, the estimated CBR HQs above 1 that were based on these measured values are believed to be overly conservative and not a reliable indicator of adverse effects (**Section 8.15**).

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that aluminum concentrations measured in this watershed were consistent with background.

Results of the UTL and UPL comparisons, and the WRS test showed that aluminum was potentially elevated with respect to background, however, given the number of aluminum sediment samples collected at this watershed compared with the background data set (53 vs. 13 samples), this finding is not unexpected. As the site data set is much larger than the background data set, the identification, by chance alone, of detecting higher concentrations in the site samples than in background samples, is quite likely. The box and whisker plot shows that both the median and 75th percentile concentrations are above the background concentrations for these two statistics.

A spatial evaluation shows that elevated sediment concentrations greater than 11,201 mg/kg are situated in two areas of Goose Prairie Creek Cove in Caddo Lake (with three and four sample locations, respectively), and in two other isolated areas within the watershed (**Appendix H**). This finding suggests that elevated detections of aluminum in sediment are not indicative of a major residual deposition area. It should also be noted that the sediment MDC was lower than the Clinton Lake background UTL of 45,000 mg/kg (Shaw, 2004b).

In conclusion, aluminum was not considered a final COPEC for the Goose Prairie Creek watershed because:

- Geochemical results indicated the concentrations are consistent with background.
- The sediment MDC was lower than the Clinton Lake background UTL.
- For the direct contact assessment and CBR evaluation, none of the available evaluation criteria suggested adverse ecological impacts to aquatic receptors. Although HQs based on measured fish tissue data were above 1, these HQs are believed to be overly conservative and not a reliable indicator of adverse effects.
- Elevated detections of aluminum in sediment are not indicative of a major residual deposition area.

Aluminum is retained on the background list for consideration by risk managers in Step 7.

10.2.1.2 Central Creek

Aluminum was not selected as a final COPEC based on findings presented below; however, it is retained on the background list for consideration by risk managers in Step 7.

The maximum aluminum EEQ for aquatic receptors for this watershed was 36 for the Muskrat, based on the NOAEL Tier 1 approach. Other aquatic receptors had the following EEQs: River Otter (21); Bank Swallow (17); and Belted Kingfisher (7.6). The maximum Raccoon EEQ was 198 and the maximum Raccoon (Louisiana Black Bear) EEQ was 106. For all these receptors, more than 90 percent of the hazard was associated with sediment exposure (either aquatic invertebrate ingestion or sediment ingestion). For the Raccoon, the maximum EEQ was reduced to 162 for the NOAEL Tier 2 approach.

For the direct contact assessment and CBR evaluation, none of the available evaluation criteria suggested adverse ecological impacts to aquatic receptors (**Tables 7-12** and **7-15**). Also see **Section 10.2.1.1**.

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that aluminum concentrations measured in this watershed were consistent with background.

Results of the UTL and UPL comparisons showed that aluminum was potentially elevated with respect to background, however, given the number of aluminum sediment samples collected at this watershed compared with the background data set (21 vs. 13 samples), this finding is not unexpected. As the site data set is larger than the background data set, the identification by chance alone of naturally-occurring elevated inorganic concentrations is quite likely. Results of the WRS test determined that aluminum is not elevated with respect to background. The box and whisker plot shows that both the median and 75^{th} percentile concentrations are above the background concentrations for these two statistics.

A spatial evaluation shows that elevated sediment concentrations, greater than 12,000 mg/kg, are situated in two areas of Caddo Lake on either side of the creek discharge point (with two and three sample locations, respectively) (**Appendix H**). This finding suggests that elevated detections of aluminum in sediment are not indicative of a major residual deposition area. It should also be noted that the sediment MDC was lower than the Clinton Lake background UTL of 45,000 mg/kg (Shaw, 2004b).

In conclusion, aluminum was not considered a final COPEC for the Central Creek watershed because:

- Geochemical results indicated the concentrations are consistent with background.
- The sediment MDC was lower than the Clinton Lake background UTL.
- Results of the WRS test showed that aluminum was not elevated with respect to background.
- For the direct contact assessment and CBR evaluation, none of the available evaluation criteria suggested adverse ecological impacts to aquatic receptors.
- Elevated detections of aluminum in sediment are not indicative of a major residual deposition area.

Aluminum is retained on the background list for consideration by risk managers in Step 7.

10.2.1.3 Harrison Bayou

Aluminum was not selected as a final COPEC based on findings presented below; however, it is retained on the background list for consideration by risk managers in Step 7.

The maximum aluminum EEQ for aquatic receptors for this watershed was 39 for the Muskrat, based on the NOAEL Tier 1 approach. Other aquatic receptors had the following EEQs: River Otter (41); Bank Swallow (18); and Belted Kingfisher (8.2). The maximum Raccoon EEQ was 210 and the maximum Raccoon (Louisiana Black Bear) EEQ was 28. For all these receptor, more than 90 percent of the hazard was associated with sediment exposure (ether aquatic invertebrate ingestion or sediment ingestion). For the Raccoon, the maximum EEQ was reduced to 115 for the NOAEL Tier 2 approach.

For the direct contact assessment and CBR evaluation, none of the available evaluation criteria suggested adverse ecological impacts to aquatic receptors (**Tables 7-8** and **7-15**).

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that aluminum concentrations measured in this watershed were consistent with background.

Results of the UTL and UPL comparisons showed that aluminum was potentially elevated with respect to background. The number of aluminum sediment samples collected from this watershed was lower than collected from the background data set (6 vs. 13 samples). Results of the WRS test determined that aluminum is not elevated with respect to background. The box and whisker plot shows that the median concentrations are very similar, and that the 75th percentile concentration for the site is above the background concentration.

A spatial evaluation shows that elevated sediment concentrations, greater than or equal to 13,000 mg/kg, are situated in two isolated areas within the watershed (**Appendix H**). This finding suggests that elevated detections of aluminum in sediment are not indicative of a major residual deposition area.

In conclusion, aluminum was not considered a final COPEC for the Harrison Bayou watershed because:

- Geochemical results indicated the concentrations are consistent with background.
- Results of the WRS test showed that aluminum was not elevated with respect to background.
- For the direct contact assessment and CBR evaluation, none of the available evaluation criteria suggested adverse ecological impacts to aquatic receptors.
- Elevated detections of aluminum in sediment are not indicative of a major residual deposition area.

Aluminum is retained on the background list for consideration by risk managers in Step 7.

10.2.1.4 Saunders Branch

Aluminum was not selected as a final COPEC based on findings presented below; however, it is retained on the background list for consideration by risk managers in Step 7.

The maximum aluminum EEQ for aquatic receptors for this watershed was 60 for the Muskrat, based on the NOAEL Tier 1 approach. Other aquatic receptors had the following EEQs: River Otter (20); Bank Swallow (29); and Belted Kingfisher (13). The maximum Raccoon EEQ was 306 and the maximum Raccoon (Louisiana Black Bear) EEQ was 172. For all these receptor, more than 90 percent of the hazard was associated with sediment exposure (ether aquatic invertebrate ingestion or sediment ingestion). For the Raccoon, the maximum EEQ was reduced to 222 for the NOAEL Tier 2 approach.

For the direct contact assessment and CBR evaluation, none of the available evaluation criteria suggested adverse ecological impacts to aquatic receptors (**Tables 7-14** and **7-15**).

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that aluminum concentrations measured in this watershed were consistent with background.

Results of the UTL and UPL comparisons, and WRS test showed that aluminum was potentially elevated with respect to background. The number of aluminum sediment samples collected from this watershed was lower than collected from the background data set (4 vs. 13 samples). The box and whisker plot shows that both the median and 75th percentile concentrations are above the background concentrations for these two statistics.

A spatial evaluation shows that two elevated sediment concentrations, greater than 12,200 mg/kg, are situated in Caddo Lake immediately adjacent to the creek discharge point (**Appendix H**). This finding suggests that there is a depositional area of elevated aluminum sediment concentrations within Caddo Lake close to the creek discharge location. However, it should be noted that the sediment MDC was lower than the Clinton Lake background UTL of 45,000 mg/kg (Shaw, 2004b).

In conclusion, aluminum was not considered a final COPEC for the Saunders Branch watershed because:

- Geochemical results indicated the concentrations are consistent with background.
- The sediment MDC was lower than the Clinton Lake background UTL.
- For the direct contact assessment and CBR evaluation, none of the available evaluation criteria suggested adverse ecological impacts to aquatic receptors.

Aluminum is retained on the background list for consideration by risk managers in Step 7.

10.2.2 Barium

This section summarizes all of the lines of evidence for barium in sediment presented in the Step 3 evaluation, and provides a recommendation as to whether barium should be carried forward to the BERA as a final COPEC. It should be noted that barium is known to be process related (**Section 1.3.10**).

10.2.2.1 Goose Prairie Creek

Barium was not selected as a final COPEC based on findings presented below.

The maximum barium EEQ for aquatic receptors for this watershed was 1.8 for the Muskrat, based on the NOAEL Tier 1 approach. Other aquatic receptors had the following EEQs that were greater than 1: Bank Swallow (1.3). The River Otter and Belted Kingfisher EEQs were less than 1.0. The maximum Raccoon EEQ was 1.0 and the maximum Raccoon (Louisiana Black Bear) EEQ was less than 1. For the Muskrat 100 percent of the EEQ was associated with sediment, for the Bank Swallow 100 percent of the EEQ was associated with sediment, and for the Raccoon 100 percent of the EEQ was associated with sediment. For these receptors, the sediment-associated EEQs were thus 1.8 for the Muskrat (1.8 x 1.0), 1.3 for the Bank Swallow (1.3 x 1.0), and 1.0 for the Raccoon (1.0 x 1.0).

For the direct contact and CBR assessments, no sediment or CBR screening levels were available for barium (**Tables 7-10** and **7-15**).

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that barium concentrations measured in this watershed were consistent with background.

Results of the UTL, UPL comparisons and the WRS test showed that barium was potentially elevated with respect to background, however, given the number of barium sediment samples collected at this watershed compared with the background data set (69 vs. 13 samples), this finding is not unexpected. As the site data set is much larger than the background data set, the identification, by chance alone, of detecting higher concentrations in the site samples than in background samples, is quite likely. The box and whisker plot shows that both the median and 75^{th} percentile concentrations are above the background concentrations for these two statistics.

A spatial evaluation shows that elevated sediment concentrations, greater than 230 mg/kg, are situated in two areas of Goose Prairie Creek Cove in Caddo Lake (with the North Cove area containing three samples with concentrations greater than 311 mg/kg) and in four other isolated areas within the watershed (**Appendix H**). This finding suggests that there is a depositional area of elevated barium sediment concentrations within the North Cove area of Caddo Lake Goose Prairie Creek Cove. However, it should be noted that the sediment MDC was lower than the Clinton Lake background UTL of 680 mg/kg (Shaw, 2004b).

In conclusion, barium was not considered a final COPEC for the Goose Prairie Creek watershed because:

- NOAEL-based wildlife sediment-associated EEQs were very close to 1 (e.g., 1.8) or below 1.
- Geochemical results indicated the concentrations are consistent with background.
- The sediment MDC was lower than the Clinton Lake background UTL.
- Although there appears to be a depositional area of elevated barium sediment concentrations within the North Cove area of Goose Prairie Creek Cove in Caddo Lake, these samples also have elevated aluminum concentrations and are thus likely to be background related.
- No sediment or CBR values were available for assessing direct contact or fish ingestion pathway.

10.2.2.2 Central Creek

Barium was not selected as a final COPEC based on findings presented below.

The maximum barium EEQ for aquatic receptors for this watershed was 3.1 for the Muskrat, based on the NOAEL Tier 1 approach. Other aquatic receptors had the following EEQs: Belted Kingfisher (less than 1) and Bank Swallow (1.3). The River Otter had an EEQ that was less than 1.0. The maximum Raccoon EEQ was 7.2 and the maximum Raccoon (Louisiana Black Bear) EEQ was less than 1. For the Muskrat 57 percent of the EEQ was associated with sediment, for the Bank Swallow 97 percent of the EEQ was associated with sediment, and for the Raccoon 13 percent of the EEQ was associated with sediment. For these receptors, the sediment-associated EEQs were thus 1.8 for the Muskrat (3.1 x 0.57), 1.3 for the Bank Swallow (1.3 x 0.97), and 0.9 for the Raccoon (7.2 x 0.13).

No barium sediment or CBR screening levels were available for the direct contact and CBR assessments (**Tables 7-12** and **7-15**).

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that barium concentrations measured in this watershed were consistent with background; however one non-TAL sample (12SD03) is a potential concern because the concentration exceeds the background screening value.

Results of the UPL comparison and the WRS test showed that barium was potentially elevated with respect to background; however, results of the UTL comparison showed that this inorganic chemical was not elevated with respect to background. Given the number of barium sediment samples collected at this watershed compared with the background data set (50 vs. 13 samples), a finding of elevated concentration with respect to background is not unexpected. As the site data set is much larger than the background data set, the identification, by chance alone, of detecting higher concentrations in the site samples than in background samples, is quite likely. The box and whisker plot shows that both the median and 75th percentile concentrations are above the background concentrations for these two statistics. The sediment MDC of 384 mg/kg was lower than the Clinton Lake background UTL of 680 mg/kg (Shaw, 2004b).

A spatial evaluation shows that elevated sediment concentrations, greater than 270 mg/kg, are situated in two isolated areas within the watershed (**Appendix H**). This shows that elevated concentrations of barium are not indicative of a major residual deposition area.

In conclusion, barium was not considered a final COPEC for the Central Creek watershed because:

- NOAEL-based wildlife sediment-associated EEQs were very close to 1 (e.g., 1.8) or below 1.
- Geochemical results indicated the concentrations are consistent with background. Although one non-TAL sediment sample result had a concentration above the background UPL, the concentration in this sample did not exceed the background UTL concentration.
- No sediment or CBR values were available for assessing direct contact or fish ingestion pathway.
- Elevated detections of barium in sediment are not indicative of a major residual deposition area.

10.2.2.3 Harrison Bayou

Barium was not selected as a final COPEC based on findings presented below.

The maximum barium EEQ for aquatic receptors for this watershed was 5.1 for the Muskrat, based on the NOAEL Tier 1 approach. Other aquatic receptors had the following EEQs: Bank Swallow (2.7), Belted Kingfisher (1.2), and River Otter (less than 1). The maximum Raccoon EEQ was 8.3 and the maximum Raccoon (Louisiana Black Bear) EEQ was 1.2. For the Muskrat 74 percent of the EEQ was associated with sediment, for the Belted Kingfisher 100 percent of the EEQ was associated with sediment, for the Bank Swallow 99 percent of the EEQ was associated with sediment, and for the Raccoon 25 percent of the EEQ was associated with sediment. For these receptors, the sediment-associated EEQs were thus 3.8 for the Muskrat (5.1

x 0.74), 1.2 for the Belted Kingfisher (1.2 x 1.0), 2.7 for the Bank Swallow (2.7 x 0.99), and 2.1 for the Raccoon (8.3 x 0.25).

For the direct contact and CBR assessments, no sediment or CBR screening levels were available for barium (**Tables 7-8** and **7-15**).

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that one barium sample was a geochemical outlier, and eleven non-TAL samples should be considered a potential concern because the concentrations exceeded the background screening concentration.

Results of the UPL and UTL comparisons and the WRS test showed that barium was potentially elevated with respect to background; however given the number of barium sediment samples collected at this watershed compared with the background data set (41 vs. 13 samples), a finding of elevated concentration with respect to background is not unexpected. As the site data set is much larger than the background data set, the identification, by chance alone, of detecting higher concentrations in the site samples than in background samples, is quite likely. The box and whisker plot shows that both the median and 75th percentile concentrations are above the background concentrations for these two statistics.

The small mammal TRV used for the Muskrat, Raccoon, and River Otter was based on a chronic rat study in which the highest dose was defined as the NOAEL, as cardiovascular hypertension was observed in all three experimental doses (Sample et al, 1996). The study noted that the significance of hypertension in wild populations is unclear, and that the maximum dose that did not affect growth, food, or water consumption was considered as the chronic NOAEL. This suggests that the NOAEL may be overly conservative and use of a more realistic NOAEL TRV would result in reducing the NOAEL-based EEQs by a considerable, although undefined, amount.

Approximately half of the estimated Muskrat EEQ was from the ingestion of plants. The barium sediment-to-plant BAF used for the Tier 1 approach was the maximum value of 0.92 from available studies (USEPA, 2003). This maximum value was used because a 90th percentile value was not presented in USEPA (2003), although a 90th percentile value is the preferred value for the Tier 1 approach. The BAF used for the Tier 2 approach was the median value of 0.156 from USEPA (2003). It should be noted that the recommended TCEQ barium BAF is 0.049 (Figure 30 TAC §350.73[e]) and a value of 0.03 is recommended by IAEA (1994). Use of either the TAC or the IAEA (1994) barium soil-to-plant BCF would reduce the estimated Muskrat Tier 1 EEQ by 20- to 30-fold, reducing the maximum sediment-associated EEQ of 3.8 to less than 1.0.

Almost 100 percent of the estimated Bank Swallow sediment-associated EEQ was from the ingestions of aquatic invertebrates, and 93 percent of the estimated raccoon sediment-associated EEQ was from the ingestions of aquatic invertebrates. The barium sediment-to-aquatic invertebrate BAF used in the Tier 1 approach (i.e., 4.5) was based on the average of six BCFs for other inorganic chemicals, as recommended in USEPA (1999), as there are no bioaccumulation data available for barium. This is an overly conservative approach at this stage of the risk assessment, as these six “surrogate” metals (Cd, Cr, Cu, Pb, Hg, and Zn) include four metals that are known sediment bioaccumulators (TCEQ, 2005). It is unrealistic to expect barium (which is not listed by TCEQ to be a sediment bioaccumulator) to bioaccumulate in aquatic invertebrates at a rate similar to known bioaccumulators. According to Bechtel Jacobs (1998), 90^{th} percentile BAF values for copper and lead (two non-bioaccumulators for sediment) are 0.468 and 0.607, respectively. It is more realistic and accurate to assume barium will bioaccumulate similar to copper and lead, and have a realistic BAF of 0.6 (similar to the BAF for lead, the metal with the higher BAF, of the two non-bioaccumulative metals). Use of this alternative BAF factor for barium would reduce the estimated EEQs for the Bank Swallow and Raccoon by a factor of approximately 7.5, reducing the EEQs of 2.7 and 2.1 to less than 1.

A spatial evaluation shows that 14 elevated sediment concentrations, greater than 229 mg/kg, are situated in isolated areas within the watershed (**Appendix H**). This finding suggests that elevated detections of barium in sediment are not indicative of a major residual deposition area.

In conclusion, barium was not considered a final COPEC for the Harrison Bayou watershed because:

- The NOAEL-based muskrat sediment-associated EEQ was less than 1 when taking into consideration alternative (and more appropriate) sediment-to-plant BAFs.
- The NOAEL-based bank swallow and raccoon sediment-associated EEQs were relatively low (e.g., 2.7 and 2.1, respectively). These NOAEL-based EEQs would be less than 1 when taking into consideration an alternative sediment-to-aquatic invertebrate BAF.
- No sediment or CBR values were available for assessing direct contact or fish ingestion pathway.
- Elevated detections of barium in sediment are not indicative of a major residual deposition area.

10.2.2.4 Saunders Branch

Barium was not selected as a final COPEC based on findings presented below.

The maximum barium EEQ for aquatic receptors for this watershed was 2.1 for the Muskrat, based on the NOAEL Tier 1 approach. Other aquatic receptors had the following EEQs: Bank

Swallow (1.5), Belted Kingfisher (less than 1), and River Otter (less than 1). The maximum Raccoon EEQ was 1.1 and the maximum Raccoon (Louisiana Black Bear) EEQ was less than 1. For all of these receptors 100 percent of the EEQ was associated with sediment. For these receptors, the sediment-associated EEQs were thus 2.1 for the Muskrat (2.1 x 1.0), 1.5 for the Bank Swallow (1.5 x 1.0), and 1.1 for the Raccoon (1.1 x 1.0).

For the direct contact and CBR assessments, no sediment or CBR screening levels were available for barium (**Tables 7-14** and **7-15**).

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that barium concentrations measured in this watershed were consistent with background, however, one non-TAL sample (18SD16) should be considered a potential concern because its concentration exceeded the background screening value.

Results of the UTL comparison and the WRS test showed that barium was not elevated with respect to background, and results of the UPL comparison showed that this inorganic chemical was potentially elevated with respect to background. The number of barium sediment samples collected at this watershed was similar to those collected from the background data set (15 vs. 13 samples). The box and whisker plot shows that both the median and 75th percentile concentrations are above the background concentrations for these two statistics.

The small mammal TRV (**Table 7-25**) used for the Muskrat, Raccoon, and River Otter was based on a chronic rat study in which the highest dose was defined as the NOAEL, as cardiovascular hypertension was observed in all three experimental doses (Sample et al, 1996). The study noted that the significance of hypertension in wild populations is unclear, and that the maximum dose that did not affect growth, food, or water consumption was considered as the chronic NOAEL. This suggests that the NOAEL may be overly conservative and use of a more realistic NOAEL TRV would result in reducing the NOAEL-based EEQs by a considerable, although undefined, amount.

More than half (i.e., 68 percent) of the estimated Muskrat EEQ was from the ingestion of plants. The barium sediment-to-plant BAF used for the Tier 1 approach was the maximum value of 0.92 from available studies (USEPA, 2003). This maximum value was used because a 90th percentile value was not presented in USEPA (2003), although a 90th percentile value is the preferred value for the Tier 1 approach. The BAF used for the Tier 2 approach was the median value of 0.156 from USEPA (2003). It should be noted that the recommended TNRCC (2001) barium BAF is 0.049 and a value of 0.03 is recommended by IAEA (1994). Use of either the TNRCC (2001) or the IAEA (1994) barium soil-to-plant BCF would reduce the estimated Muskrat Tier 1 EEQ by 20- to 30-fold, reducing the maximum sediment-associated EEQ of 2.1 to less than 1.0.

A spatial evaluation shows that two elevated sediment concentrations greater than or equal to 261 mg/kg are situated in Caddo Lake immediately adjacent to the creek discharge point and one elevated concentration is within the watershed (**Appendix H**). This finding suggests that there is a depositional area of elevated barium sediment concentrations within Caddo Lake close to the creek discharge location. However, it should be noted that the sediment MDC was lower than the Clinton Lake background UTL of 680 mg/kg (Shaw, 2004b).

In conclusion, barium was not considered a final COPEC for the Saunders Branch watershed because:

- The NOAEL-based Muskrat sediment-associated EEQ was less than 1 when taking into consideration alternative sediment-to-plant BAFs.
- The NOAEL-based Bank Swallow and Raccoon sediment-associated EEQs were close to 1 (e.g., 2.1 and 1.1, respectively).
- Geochemical results indicated the concentrations are consistent with background. Although one non-TAL sediment sample result had a concentration above the background UPL, the concentration in this sample did not exceed the background UTL concentration.
- The sediment MDC was lower than the Clinton Lake background UTL.
- Results of the UTL comparison and WRS test showed that barium was not elevated with respect to background.
- No sediment or CBR values were available for assessing direct contact or fish ingestion pathway.

10.2.3 Cadmium

This section summarizes all of the lines of evidence for cadmium in sediment presented in the Step 3 evaluation, and provides a recommendation as to whether cadmium should be carried forward to the BERA as a final COPEC. It should be noted that cadmium is not known to be related to any processes at the installation (**Section 1.3.10**).

10.2.3.1 Goose Prairie Creek

Cadmium was not selected as a final COPEC based on findings presented below.

The maximum cadmium EEQ for aquatic receptors for this watershed was less than 1.0.

For direct contact, cadmium concentrations were not a concern, as none of the direct contact sediment toxicity levels were exceeded (**Table 7-10**). For the CBR assessment, cadmium concentrations were a concern as the Tier 1 CBR NOAEL-based HQ was above 1 (21). The Tier 2 CBR NOAEL-based HQ of 1.5 was above 1 (**Table 7-15**). As discussed in **Appendix C**, there is considerable uncertainty associated with the CBR approach. There is also considerable uncertainty with the TrophicTrace® modeling approach used to estimate cadmium concentrations in catfish tissue from levels in sediment. As shown in **Section 8.15**, measured cadmium concentrations in brown bullheads were non-detect, strongly suggesting that modeled fish tissue concentrations (and the elevated CBR HQs) are not representative of actual conditions.

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that cadmium concentrations measured in this watershed were consistent with background. UTL and UPL comparisons and the WRS test were not run, and a box and whisker plot was not created as cadmium was not detected in the background data set.

Cadmium was detected in 48 out of 186 sediment samples collected, resulting in a frequency of detection of 26 percent. A spatial evaluation shows that elevated concentrations of cadmium are not indicative of a major residual deposition area, as levels greater than 0.883 mg/kg are limited to two sample locations in the North Cove of Goose Prairie Creek Cove, Caddo Lake and to two isolated sample locations within the watershed (**Appendix H**).

In conclusion, cadmium was not considered a final COPEC for the Goose Prairie Creek because:

- All wildlife EEQs were estimated to be less than 1.
- Direct contact hazards were found to be acceptable.
- CBR-based HQs were not a concern, based on measured fish tissue concentrations of cadmium showing non-detect results.
- Geochemical results indicated the concentrations are consistent with background.
- Elevated detections of cadmium in sediment are not indicative of a major residual deposition area.

10.2.3.2 Central Creek

Cadmium was not selected as a final COPEC based on findings presented below.

The maximum cadmium EEQ for aquatic receptors for this watershed was less than 1.0.

For direct contact, cadmium concentrations were not a concern, as none of the direct contact sediment toxicity levels were exceeded (**Table 7-12**). For the CBR assessment cadmium concentrations were a concern, as the Tier 1 CBR NOAEL-based HQ was above 1 (22). The Tier 2 CBR NOAEL-based HQ of 1.4 was above 1 (**Table 7-15**). As discussed in **Appendix C**, there is considerable uncertainty associated with the CBR approach. There is also considerable uncertainty with the TrophicTrace® modeling approach used to estimate cadmium concentrations in catfish tissue from levels in sediment. As shown in **Section 8.15**, measured cadmium concentrations in brown bullheads collected from the Goose Prairie Creek portion of Caddo Lake were non-detect (and cadmium was detected in Goose Prairie Creek sediment), strongly suggesting that modeled fish tissue concentrations (and the elevated CBR HQs) are not representative of actual conditions (**Section 10.2.3.1**).

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that one cadmium sample (FWS-118) was a geochemical outlier and one non-TAL sample (12SD10) was a potential concern as the concentration was greater than the background screening concentration.

UTL and UPL comparisons and the WRS test were not run, and a box and whisker plot was not created as cadmium was not detected in the background data set.

Cadmium was detected in 10 out of 50 sediment samples collected, resulting in a frequency of detection of 20 percent. A spatial evaluation shows that concentrations of cadmium are not indicative of a major residual deposition area, as levels between 0.06 and 0.174 mg/kg are found in five samples collected from Caddo Lake on either side of the creek discharge point, and the MDC of 6.27 mg/kg is found at an isolated location within the watershed (**Appendix H**). It should also be noted that the sediment levels in Caddo Lake were lower than the Clinton Lake background UTL of 0.31 mg/kg (Shaw, 2004b).

In conclusion, cadmium was not considered a final COPEC for the Central Creek because:

- Direct contact hazards were found to be acceptable.
- CBR-based HQs are not expected to be a concern, based on measured fish tissue concentrations of cadmium showing non-detect results in Caddo Lake.
- All wildlife EEQs were estimated to be less than 1.
- Geochemical results indicated the concentrations are consistent with background.
- Elevated detections of cadmium in sediment are not indicative of a major residual deposition area.

10.2.3.3 Harrison Bayou

Cadmium was not selected as a final COPEC based on findings presented below.

The maximum cadmium EEQ for aquatic receptors for this watershed was less than 1.0.

For direct contact, cadmium concentrations were not a concern, as none of the direct contact sediment toxicity levels were exceeded (**Table 7-8**). For the CBR assessment, cadmium concentrations were a concern, as the Tier 1 CBR NOAEL-based HQ was above 1 (5.7). The

Tier 2 CBR NOAEL-based HQ was below 1 (0.6) (**Table 7-15**). As discussed in **Appendix C**, there is considerable uncertainty associated with the CBR approach. There is also considerable uncertainty with the TrophicTrace® modeling approach used to estimate cadmium concentrations in catfish tissue from levels in sediment. As shown in **Section 8.15**, measured cadmium concentrations in brown bullheads collected from the Goose Prairie Creek portion of Caddo Lake were non-detect (and cadmium was detected in Goose Prairie Creek sediment), strongly suggesting that modeled fish tissue concentrations (and the elevated CBR HQs) are not representative of actual conditions (**Section 10.2.3.1**).

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that cadmium concentrations measured in this watershed were consistent with background.

UTL and UPL comparisons and the WRS test were not run, and a box and whisker plot was not created as cadmium was not detected in the background data set.

Cadmium was detected in 1 out of 41 sediment samples collected, resulting in a frequency of detection of 2.4 percent. A spatial evaluation shows that the one elevated sediment detection of 0.183 mg/kg is situated in the center of the watershed approximately 500 feet from the Harrison Bayou flowage (**Appendix H**). This finding suggests that this elevated detection of cadmium in sediment is not indicative of a major residual deposition area.

In conclusion, cadmium was not considered a final COPEC for the Harrison Bayou because:

- Direct contact hazards were found to be acceptable.
- CBR-based HQs are not expected to be a concern, based on measured fish tissue concentrations of cadmium showing non-detect results in Caddo Lake.
- All wildlife EEQs were estimated to be less than 1.
- Geochemical results indicated the concentrations are consistent with background.
- Cadmium was detected infrequently (2.4 percent).
- Elevated detections of cadmium in sediment are not indicative of a major residual deposition area.

10.2.3.4 Saunders Branch

Cadmium was not selected as a final COPEC based on findings presented below.

The maximum cadmium EEQ for aquatic receptors for this watershed was less than 1.0.

For direct contact, cadmium concentrations were not a concern, as none of the direct contact sediment toxicity levels were exceeded (**Table 7-14**). For the CBR assessment, cadmium concentrations were a concern, as the Tier 1 CBR NOAEL-based HQ was above 1 (8.6). The Tier 2 CBR NOAEL-based HQ was below 1 (0.5) (**Table 7-15**). As discussed in **Appendix C**, there is considerable uncertainty associated with the CBR approach. There is also considerable uncertainty with the TrophicTrace® modeling approach used to estimate cadmium concentrations in catfish tissue from levels in sediment. As shown in **Section 8.15**, measured cadmium concentrations in brown bullheads collected from the Goose Prairie Creek portion of Caddo Lake were non-detect (and cadmium was detected in Goose Prairie Creek sediment), strongly suggesting that modeled fish tissue concentrations (and the elevated CBR HQs) are not representative of actual conditions (**Section 10.2.3.1**).

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that cadmium concentrations measured in this watershed were consistent with background.

UTL and UPL comparisons and the WRS test were not run, and a box and whiskers plot was not created as cadmium was not detected in the background data set.

Cadmium was detected in 3 out of 14 sediment samples collected, resulting in a frequency of detection of 21 percent. A spatial evaluation shows that two elevated sediment concentrations, greater than or equal to 0.151 mg/kg, are situated in Caddo Lake immediately adjacent to the creek discharge point (**Appendix H**). It should be noted that two samples from different depths occur at one of the Lake sample locations. This finding suggests that there is a depositional area of elevated cadmium sediment concentrations within Caddo Lake close to the creek discharge location. However, it should be noted that the sediment MDC was lower than the Clinton Lake background UTL of 0.31 mg/kg (Shaw, 2004b).

In conclusion, cadmium was not considered a final COPEC for the Saunders Branch because:

- All wildlife EEQs were estimated to be less than 1.
- Direct contact hazards were found to be acceptable.
- CBR-based HQs are not expected to be a concern, based on measured fish tissue concentrations of cadmium showing non-detect results in Caddo Lake.
- Geochemical results indicated the concentrations are consistent with background.
- The sediment MDC was lower than the Clinton Lake background UTL.

10.2.4 Chromium

This section summarizes all of the lines of evidence for chromium in sediment presented in the Step 3 evaluation, and provides a recommendation as to whether chromium should be carried forward to the BERA as a final COPEC. It should be noted that chromium is known to be process related (**Section 1.3.10**).

Chromium was selected as a preliminary COPEC in surface water for the Harrison Bayou watershed, however, this inorganic chemical was not selected as a preliminary COPEC in sediment for any watershed (**Table 6-28**). Therefore, chromium is not a final COPEC in sediment for Goose Prairie Creek, Central Creek, Harrison Bayou, or Saunders Branch watersheds.

10.2.5 Copper

This section summarizes all of the lines of evidence for copper in sediment presented in the Step 3 evaluation, and provides a recommendation as to whether copper should be carried forward to the BERA as a final COPEC. It should be noted that copper is not known to be related to any processes at LHAAP (**Section 1.3.10**).

10.2.5.1 Goose Prairie Creek

Copper was not selected as a final COPEC based on findings presented below.

The maximum copper EEQ for aquatic receptors for this watershed was less than 1.0.

For direct contact, copper concentrations were not a concern, as none of the direct contact sediment toxicity levels were exceeded (**Table 7-10**). For the CBR assessment, copper concentrations were a concern, as the Tier 1 CBR NOAEL-based HQ was above 1 (3.6). The Tier 2 CBR NOAEL-based HQ was below 1 (0.9) (**Table 7-15**). As discussed in **Appendix C**, there is considerable uncertainty associated with the CBR approach. There is also considerable uncertainty with the TrophicTrace® modeling approach used to estimate copper concentrations in catfish tissue from levels in sediment. As shown in **Section 8.15**, measured copper concentrations in brown bullheads were non-detect, strongly suggesting that modeled fish tissue concentrations (and the elevated CBR HQs) are not representative of actual conditions.

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that four copper samples were geochemical outliers; however, three of these samples had copper concentrations that were below the maximum background concentration of 23.7 mg/kg.

Results of the UPL comparisons and the WRS test showed that copper was potentially elevated with respect to background, however, results of the UTL comparison showed that this inorganic chemical was not elevated with respect to background. Given the number of copper sediment samples collected at this watershed compared with the background data set (58 vs. 13 samples), the UPL finding is not unexpected. As the site data set is much larger than the background data set, the identification, by chance alone, of detecting higher concentrations in the site samples than in background samples, is quite likely. The box and whisker plot shows that both the median and 75th percentile concentrations are above the background concentrations for these two statistics.

A spatial evaluation shows that two elevated sediment concentrations, greater than 35.8 mg/kg, are situated in two areas of Goose Prairie Creek Cove in Caddo Lake (**Appendix H**). This finding suggests that elevated detections of copper in sediment are not indicative of a major residual deposition area, as there are only isolated occurrences.

In conclusion, copper was not considered a final COPEC for the Goose Prairie Creek because:

- All wildlife EEQs were estimated to be less than 1.
- Direct contact hazards were found to be acceptable.
- CBR-based HQs were not a concern, based on non-detected tissue concentrations of copper in fish collected from Caddo Lake.
- Geochemical results generally indicated the concentrations are consistent with background. Of the four copper samples with geochemical results inconsistent with background, three had copper concentrations that were below the maximum background concentration.
- Elevated detections of copper in sediment are not indicative of a major residual deposition area.

10.2.5.2 Central Creek

Copper was not selected as a final COPEC based on findings presented below.

The maximum copper EEQ for aquatic receptors for this watershed was less than 1.0.

For direct contact, copper concentrations were not a concern, as none of the direct contact sediment toxicity levels were exceeded (**Table 7-12**). For the CBR assessment, copper concentrations were a concern, as the Tier 1 CBR NOAEL-based HQ was above 1 (2.0). The Tier 2 CBR NOAEL-based HQ was below 1 (0.5) (**Table 7-15**). As discussed in **Appendix C**, there is considerable uncertainty associated with the CBR approach. There is also considerable uncertainty with the TrophicTrace® modeling approach used to estimate copper concentrations in catfish tissue from levels in sediment. As shown in **Section 8.15**, measured copper concentrations in brown bullheads collected from the Goose Prairie Creek portion of Caddo Lake were non-detect (and copper was detected in Goose Prairie Creek sediment), strongly suggesting that modeled fish tissue concentrations (and the elevated CBR HQs) are not representative of actual conditions (**Section 10.2.5.1**).

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that one copper sample (FWS-118) was a geochemical outlier. Results of the UPL and UTL comparisons showed that copper was not elevated with respect to background; however, results of the WRS test showed that this inorganic chemical was potentially elevated with respect to background.

In conclusion, copper was not considered a final COPEC for the Central Creek because:

- Direct contact hazards were found to be acceptable.
- All wildlife EEQs were estimated to be less than 1.
- CBR-based HQs were not a concern, based on non-detected tissue concentrations of copper in fish collected from Caddo Lake.
- Geochemical results indicated that all the concentrations, except one, are consistent with background.
- Results of the UTL and UPL comparisons showed that copper was not elevated with respect to background.

10.2.5.3 Harrison Bayou

Copper was not selected as a final COPEC based on findings presented below.

The maximum copper EEQ for aquatic receptors for this watershed was less than 1.0.

For direct contact, copper concentrations were not a concern, as none of the direct contact sediment toxicity levels were exceeded (**Table 7-8**). For the CBR assessment, copper concentrations were a concern, as the Tier 1 CBR NOAEL-based HQ was above 1 (2.2). The Tier 2 CBR NOAEL-based HQ was below 1 (0.6) (**Table 7-15**). As discussed in **Appendix C**, there is considerable uncertainty associated with the CBR approach. There is also considerable uncertainty with the TrophicTrace® modeling approach used to estimate copper concentrations in catfish tissue from levels in sediment. As shown in **Section 8.15**, measured copper concentrations in brown bullheads collected from the Goose Prairie Creek portion of Caddo Lake were non-detect (and copper was detected in Goose Prairie Creek sediment), strongly suggesting that modeled fish tissue concentrations (and the elevated CBR HQs) are not representative of actual conditions (**Section 10.2.5.1**).

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that copper concentrations measured in this watershed were consistent with background.

Results of the UPL and UTL comparisons showed that copper was not elevated with respect to background; however, results of the WRS test showed that this inorganic chemical was potentially elevated with respect to background. The number of copper sediment samples collected at this watershed was more than that collected from the background data set (28 vs. 13 samples). The box and whisker plot shows that both the median and 75th percentile concentrations are above the background concentrations for these two statistics.

In conclusion, copper was not considered a final COPEC for the Harrison Bayou watershed because:

- All wildlife EEQs were estimated to be less than 1.
- Direct contact hazards were found to be acceptable.
- CBR-based HQs were not a concern, based on non-detected tissue concentrations of copper in fish collected from Caddo Lake.
- Geochemical results indicated that concentrations are consistent with background.
- Results of the UTL and UPL comparisons showed that copper was not elevated with respect to background.

10.2.5.4 Saunders Branch

Copper was not selected as a final COPEC based on findings presented below.

The maximum copper EEQ for aquatic receptors for this watershed was less than 1.0.

For direct contact, copper concentrations were not a concern, as none of the direct contact sediment toxicity levels were exceeded (**Table 7-14**). For the CBR assessment, copper concentrations were a concern, as the Tier 1 CBR NOAEL-based HQ was above 1 (3.0). The Tier 2 CBR NOAEL-based HQ was below 1 (0.7) (**Table 7-15**). As discussed in **Appendix C**, there is considerable uncertainty associated with the CBR approach. There is also considerable uncertainty with the TrophicTrace® modeling approach used to estimate copper concentrations in catfish tissue from levels in sediment. As shown in **Section 8.15**, measured copper concentrations in brown bullheads collected from the Goose Prairie Creek portion of Caddo Lake were non-detect (and copper was detected in Goose Prairie Creek sediment), strongly suggesting that modeled fish tissue concentrations (and the elevated CBR HQs) are not representative of actual conditions (**Section 10.2.5.1**).

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that copper concentrations measured in this watershed were consistent with background.

Results of the UPL and UTL comparisons showed that copper was not elevated with respect to background, however, results of the WRS test showed that this inorganic chemical was potentially elevated with respect to background. The number of copper sediment samples collected at this watershed was less than that collected from the background data set (8 vs. 13 samples). The box and whisker plot shows that both the median and 75th percentile concentrations are above the background concentrations for these two statistics.

In conclusion, copper was not considered a final COPEC for the Saunders Branch watershed because:

- All wildlife EEQs were estimated to be less than 1.
- Direct contact hazards were found to be acceptable.
- CBR-based HQs were not a concern, based on non-detected tissue concentrations of copper in fish collected from Caddo Lake.
- Geochemical results indicated that concentrations are consistent with background.
- Results of the UTL and UPL comparisons showed that copper was not elevated with respect to background.

10.2.6 Lead

This section summarizes all of the lines of evidence for lead in sediment presented in the Step 3 evaluation, and provides a recommendation as to whether lead should be carried forward to the BERA as a final COPEC. It should be noted that lead is known to be process related (**Section 1.3.10**).

10.2.6.1 Goose Prairie Creek

Lead was selected as a final COPEC based on findings presented below.

The maximum lead EEQ for aquatic receptors for this watershed was 2.0 for the Bank Swallow, based on the NOAEL Tier 1 approach. Other aquatic receptors (Belted Kingfisher, River Otter, Muskrat, and Raccoon) had EEQs below 1.0. For the Bank Swallow 95 percent of the EEQ was associated with sediment. For this receptor, the sediment-associated EEQ was thus 1.9 (2.0 x 0.95).

For the direct contact and CBR assessments lead concentrations were a concern as a majority of the available direct-contact sediment screening values were exceeded by both the Tier 1 and 2 concentrations (**Table 7-10**). The Tier 1 CBR NOAEL-based HQ was above 1 (4.2), however, the Tier 2 CBR NOAEL-based HQ was below 1 (0.4) (**Table 7-15**). As shown in **Section 8.15**, measured lead concentrations in brown bullheads were non-detect, strongly suggesting that modeled fish tissue concentrations (and the elevated CBR HQs) are not representative of actual conditions.

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that ten lead samples were geochemical outliers, and 13 non-TAL samples have concentrations that exceed the background screening value and are thus a potential concern.

Results of the UTL and UPL comparisons and the WRS test showed that lead was potentially elevated with respect to background. Given the number of lead sediment samples collected at this watershed compared with the background data set (69 vs. 13 samples), the UTL and UPL findings are not unexpected. As the site data set is much larger than the background data set, the identification, by chance alone, of detecting higher concentrations in the site samples than in background samples, is quite likely. The box and whisker plot shows that the 75th percentile concentration for the site data is above that for the background data set; however, the median concentrations are similar.

Sediment-to-aquatic invertebrate BCFs used for modeling lead were 0.61 for the Tier 1 assessment and 0.071 for the Tier 2 assessment, representing 90th percentile and median values from Bechtel Jacobs (1998). No alternative BCFs were readily available.

A spatial evaluation shows that elevated sediment concentrations greater than 38.4 mg/kg are situated in two areas of Goose Prairie Creek Cove in Caddo Lake (with two and four sample locations, respectively), and in ten other isolated areas within the watershed (**Appendix H**). The North Cove area had four samples with concentrations greater than 145.1 mg/kg suggesting that there is a depositional area of elevated lead sediment concentrations within the North Cove area of Goose Prairie Creek Cove in Caddo Lake.

In conclusion, lead was considered a final COPEC for the Goose Prairie Creek watershed because:

- Concentrations of lead were found to be inconsistent with background, based on a geochemical evaluation, UTL and UPL comparisons, and results of the WRS test.
- There is a concern for direct contact hazards for benthic invertebrates.
- Findings suggest that there is a depositional area of elevated lead sediment concentrations within the North Cove area of Goose Prairie Creek Cove in Caddo Lake.

10.2.6.2 Central Creek

Lead was not selected as a preliminary COPEC in sediment (**Table 6-28**). Therefore, lead is not a final COPEC for the Central Creek watershed.

10.2.6.3 Harrison Bayou

Lead was not selected as a preliminary COPEC in sediment (**Table 6-28**). Therefore, lead is not a final COPEC for the Harrison Bayou watershed.

10.2.6.4 Saunders Branch

Lead was not selected as a preliminary COPEC in sediment (**Table 6-28**). Therefore, lead is not a final COPEC for the Saunders Branch watershed.

10.2.7 Mercury

This section summarizes all of the lines of evidence for mercury in sediment presented in the Step 3 evaluation, and provides a recommendation as to whether mercury should be carried forward to the BERA as a final COPEC. It should be noted that mercury is associated with a known release at LHAAP (**Section 1.3.10**).

10.2.7.1 Goose Prairie Creek

Mercury was selected as a final COPEC based on findings presented below.

The maximum mercury EEQ for aquatic receptors for this watershed was 5.1 for the Bank Swallow, based on the NOAEL Tier 1 approach. Other aquatic receptors had the following EEQs: Belted Kingfisher (2.4), Muskrat and River Otter (less than 1). The maximum Raccoon EEQ and the maximum Raccoon (Louisiana Black Bear) EEQ were less than 1. For the Bank Swallow and the Belted Kingfisher 100 percent of the EEQ was associated with sediment. Ninety-eight percent of the Bank Swallow's and 88 percent of the Belted Kingfisher's hazard were from the ingestion of aquatic invertebrates.

For the direct contact and CBR assessments mercury concentrations were a concern, as a majority of the available direct-contact sediment screening values were exceeded by both the Tier 1 and 2 concentrations (**Table 7-10**). The Tier 1 CBR NOAEL-based HQ was above 1 (1.9), however, the Tier 2 CBR NOAEL-based HQ was below 1 (0.6) (**Table 7-15**). As shown in **Section 8.15**, measured mercury concentrations in brown bullheads were non-detect, strongly suggesting that modeled fish tissue concentrations (and the elevated CBR HQs) are not representative of actual conditions.

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that thirteen mercury samples were geochemical outliers, and two non-TAL samples have concentrations above the background screening value and are a potential concern.

Results of the UTL and UPL comparisons showed that mercury was potentially elevated with respect to background, however, given the number of mercury sediment samples collected at this watershed compared with the background data set (69 vs. 13 samples), this finding is not unexpected. As the site data set is much larger than the background data set, the identification, by chance alone, of detecting higher concentrations in the site samples than in background samples, is quite likely. The WRS test was not run and the box and whisker plot was not created as more than 50 percent of the samples in either the site or background data set were nondetect.

Sediment to aquatic invertebrate BCFs used for modeling mercury were 2.87 for the Tier 1 assessment and 1.14 for the Tier 2 assessment, representing 90^{th} percentile and median values from Bechtel Jacobs (1998). An alternative BCF value of 0.34 is available from USEPA (1999). If this alternative BCF value was used, Tier 1 EEQs for the Bank Swallow and Belted Kingfisher would be reduced by approximately 8-fold and Tier 2 EEQs would be decline approximately 3-fold. This would reduce the Tier 1 Bank Swallow EEQ from 5.1 to 0.6, and the Belted Kingfisher EEQ from 2.4 to 0.3.

A spatial evaluation shows that elevated sediment concentrations, greater than 0.13 mg/kg, are situated in two areas of Goose Prairie Creek Cove in Caddo Lake (with the North Cove area containing three samples with concentrations greater than 1.02 mg/kg) and in six other isolated areas within the watershed (**Appendix H**). This finding suggests that there is a depositional area of elevated mercury sediment concentrations within the North Cove area of Caddo Lake Goose Prairie Creek Cove.

In addition, the recent finding of mercury at 778 mg/kg within a tributary to Goose Prairie Creek (sediment sample 49SD65 collected on 12/19/2004) suggests an additional area of concern.

In conclusion, mercury was considered a final COPEC for the Goose Prairie Creek watershed because:

- Concentrations of mercury were found to be inconsistent with background, based on a geochemical evaluation, UTL and UPL comparisons, and results of the WRS test.
- There is a concern for direct contact hazards for benthic invertebrates.
- Findings suggest that there is a depositional area of elevated mercury sediment concentrations within the North Cove area of Goose Prairie Creek Cove in Caddo Lake.

- The recent finding of mercury at 778 mg/kg within the Goose Prairie Creek watershed suggests an additional area of concern.

10.2.7.2 Central Creek

Mercury was not selected as a final COPEC based on findings presented below.

The maximum mercury EEQ for aquatic receptors for this watershed was 1.9 for the Bank Swallow, based on the NOAEL Tier 1 approach. Other aquatic receptors (Belted Kingfisher, Muskrat, and River Otter) had EEQs below 1.0. The maximum Raccoon EEQ and the maximum Raccoon (Louisiana Black Bear) EEQs were also less than 1.0. For the Bank Swallow 100 percent of the EEQ was associated with sediment, specifically 98 percent from the ingestion of aquatic invertebrates.

For the direct contact and CBR assessments, mercury concentrations were not a concern, as none of the available direct-contact sediment screening values were exceeded (**Table 7-12**) and CBR HQs were all below 1 (**Table 7-15**).

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that mercury concentrations measured in this watershed were consistent with background.

Results of the UTL and UPL comparisons showed that mercury was potentially elevated with respect to background, however, given the number of mercury sediment samples collected at this watershed compared with the background data set (50 vs. 13 samples), this finding is not unexpected. As the site data set is much larger than the background data set, the identification, by chance alone, of detecting higher concentrations in the site samples than in background samples, is quite likely. The WRS test was not run and the box and whisker plot was not created as more than 50 percent of the samples in either the site or background data set were nondetect.

Sediment to aquatic invertebrate BCFs used for modeling mercury were 2.87 for the Tier 1 assessment and 1.14 for the Tier 2 assessment, representing 90^{th} percentile and median values from Bechtel Jacobs (1998). An alternative BCF value of 0.34 is available from USEPA (1999). If this alternative BCF value was used, Tier 1 EEQs for the Bank Swallow would be reduced by approximately 8-fold. This would reduce the Tier 1 Bank Swallow EEQ from 1.9 to 0.2.

A spatial evaluation shows that six sediment sample locations have elevated concentrations greater than 0.07 mg/kg, and are situated in two areas of Caddo Lake on either side of the creek discharge point (**Appendix H**). However, of these samples, only one had a concentration above 0.186 mg/kg (the 75^{th} quantile). However, it should be noted that the sediment MDC was lower than the Clinton Lake background UTL of 0.245 mg/kg (Shaw, 2004b).

In conclusion, mercury was not considered a final COPEC for the Central Creek watershed because:

- Direct contact and CBR hazards were found to be acceptable.
- The maximum wildlife EEQ was estimated to be less than 1 when taking into consideration alternative sediment-to-aquatic invertebrate BAFs.
- All other wildlife EEQs were less than 1.
- Geochemical results indicated that concentrations are consistent with background.
- The sediment MDC was lower than the Clinton Lake background UTL.
- Elevated detections of mercury in sediment are not indicative of a major residual deposition area.

10.2.7.3 Harrison Bayou

Mercury was not selected as a final COPEC based on findings presented below.

The maximum mercury EEQ for aquatic receptors for this watershed was 1.6 for the Bank Swallow, based on the NOAEL Tier 1 approach. Other aquatic receptors (Belted Kingfisher, Muskrat, River Otter, Raccoon, and Raccoon (Louisiana Black Bear) had EEQs below 1.0. For the Bank Swallow 100 percent of the EEQ was associated with sediment, specifically 98 percent from the ingestion of aquatic invertebrates.

For the direct contact and CBR assessments, mercury concentrations were not a concern (**Table 7-8**), as none of the available direct-contact sediment screening values were exceeded and CBR HQs were all below 1 (**Table 7-15**).

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that mercury concentrations measured in this watershed were consistent with background, however, one non-TAL sample (17SD03) should be considered a potential concern because its concentration exceeded the background screening concentration.

Results of the UTL and UPL comparisons showed that mercury was potentially elevated with respect to background, however, given the number of mercury sediment samples collected at this watershed compared with the background data set (42 vs. 13 samples), this finding is not unexpected. As the site data set is much larger than the background data set, the identification, by chance alone, of detecting higher concentrations in the site samples than in background samples, is quite likely. The WRS test was not run and the box and whisker plot was not created as more than 50 percent of the samples in either the site or background data set were nondetect.

Sediment-to-aquatic invertebrate BCFs used for modeling mercury were 2.87 for the Tier 1 assessment and 1.14 for the Tier 2 assessment, representing 90th percentile and median values from Bechtel Jacobs (1998). An alternative BCF value of 0.34 is available from USEPA (1999). If this alternative BCF value was used, Tier 1 EEQs for the Bank Swallow would be reduced by approximately 8-fold and Tier 2 EEQs would be decline approximately 3-fold. This would reduce the Tier 1 Bank Swallow EEQ from 1.6 to 0.2.

A spatial evaluation shows that one elevated sediment concentration of 0.15 mg/kg (17SD03) is situated to the east of the center of the watershed (**Appendix H**). This finding suggests that there is no indication of a major residual deposition area.

In conclusion, mercury was not considered a final COPEC for the Harrison Bayou watershed because:

- Direct contact and CBR hazards were found to be acceptable.
- The maximum wildlife EEQ was estimated to be less than 1 when taking into consideration alternative sediment-to-aquatic invertebrate BAFs.
- All other wildlife EEQs were less than 1.
- Geochemical results indicated that concentrations are consistent with background.
- Elevated detections of mercury in sediment are not indicative of a major residual deposition area.

10.2.7.4 Saunders Branch

Mercury was not selected as a final COPEC based on findings presented below.

The maximum mercury EEQ for aquatic receptors for this watershed was 1.6 for the Bank Swallow, based on the NOAEL Tier 1 approach. Other aquatic receptors (Belted Kingfisher, Muskrat, and River Otter) had EEQ that were less than 1.0. The maximum Raccoon and Raccoon (Louisiana Black Bear) EEQs were also less than 1.0. For the Bank Swallow 100 percent of the EEQ was associated with sediment, specifically 98 percent from the ingestion of aquatic invertebrates.

For the direct contact and CBR assessments mercury concentrations were not a concern (**Table 7-14**), as none of the available direct-contact sediment screening values were exceeded and CBR HQs were all below 1 (**Table 7-15**).

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that mercury concentrations measured in this watershed were consistent with background.

Results of the UTL and UPL comparisons showed that mercury was potentially elevated with respect to background; however, results of the WRS test showed that this inorganic chemical was not elevated with respect to background. The number of mercury sediment samples collected at this watershed was similar to the background data set (14 vs. 13 samples). The box and whisker plot shows that both the median and 75th percentile concentrations above the background concentrations for these two statistics.

Sediment to aquatic invertebrate BCFs used for modeling mercury were 2.87 for the Tier 1 assessment and 1.14 for the Tier 2 assessment, representing 90th percentile and median values from Bechtel Jacobs (1998). An alternative BCF value of 0.34 is available from USEPA (1999). If this alternative BCF value was used, Tier 1 EEQs for the Bank Swallow would be reduced by approximately 8-fold and Tier 2 EEQs would be decline approximately 3-fold. This would reduce the Tier 1 Bank Swallow EEQ from 1.6 to 0.2.

A spatial evaluation shows that two elevated sediment concentrations, greater than or equal to 0.13 mg/kg, are situated in Caddo Lake immediately adjacent to the creek discharge point (**Appendix H**). This finding suggests that there is a depositional area of elevated mercury sediment concentrations within Caddo Lake close to the creek discharge location. However, it should be noted that the sediment MDC was lower than the Clinton Lake background UTL of 0.245 mg/kg (Shaw, 2004b).

In conclusion, mercury was not considered a final COPEC for the Saunders Branch watershed because:

- Direct contact and CBR hazards were found to be acceptable.
- The maximum wildlife EEQ was estimated to be less than 1 when taking into consideration alternative sediment-to-aquatic invertebrate BAFs.
- All other wildlife EEQs were less than 1.
- Geochemical results indicated that concentrations are consistent with background.
- The sediment MDC was lower than the Clinton Lake background UTL.

10.2.8 Nickel

This section summarizes all of the lines of evidence for nickel in sediment presented in the Step 3 evaluation, and provides a recommendation as to whether nickel should be carried forward to the BERA as a final COPEC. It should be noted that nickel is not known to be related to any processes at the installation (**Section 1.3.10**).

10.2.8.1 Goose Prairie Creek

Nickel was not selected as a preliminary COPEC in sediment (**Table 6-28**). Therefore, nickel is not a final COPEC for the Goose Prairie Creek watershed.

10.2.8.2 Central Creek

Nickel was not selected as a final COPEC based on findings presented below.

The maximum nickel EEQ for aquatic receptors, including the semi-aquatic raccoon, for this watershed was less than 1.

For direct contact, nickel concentrations were not a concern, as none of the direct contact sediment toxicity levels were exceeded (**Table 7-12**). For the CBR assessment, nickel concentrations were a concern, as the Tier 1 CBR NOAEL-based HQ was above 1 (18.3) and the Tier 2 CBR NOAEL-based HQ was also above 1 (3.3) (**Table 7-15**). As discussed in **Appendix C**, there is considerable uncertainty associated with the CBR approach. There is also considerable uncertainty with the TrophicTrace® modeling approach used to estimate nickel concentrations in catfish tissue from levels in sediment. As shown in **Section 8.15**, measured nickel concentrations in brown bullheads collected from the Goose Prairie Creek portion of Caddo Lake were non-detect (and nickel was detected in Goose Prairie Creek sediment), strongly suggesting that modeled fish tissue concentrations (and the elevated CBR HQs) are not representative of actual conditions.

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated nickel concentrations measured in this watershed were consistent with background.

Results of the UPL and UTL comparisons and the WRS test showed that nickel was not elevated with respect to background. The number of nickel sediment samples collected at this watershed was greater than that collected from the background data set (50 vs. 13 samples). The box and whisker plot shows that both the median and 75th percentile concentrations are above the background concentrations for these two statistics.

In conclusion, nickel was not considered a final COPEC for the Central Creek watershed because:

- All wildlife EEQs were estimated to be less than 1.
- Direct contact hazards were found to be acceptable.
- CBR-based HQs are not expected to be a concern, based on measured fish tissue concentrations of nickel showing non-detect results in Caddo Lake.

- Results of the UTL and UPL comparisons, and WRS test showed that nickel was not elevated with respect to background.
- Geochemical results indicated that concentrations are consistent with background.

10.2.8.3 Harrison Bayou

Nickel was not selected as a final COPEC based on findings presented below.

The maximum nickel EEQ for aquatic receptors for this watershed was less than 1.

For direct contact, nickel concentrations were not a concern, as none of the direct contact sediment toxicity levels were exceeded (**Table 7-8**). For the CBR assessment, nickel concentrations were a concern, as the Tier 1 CBR NOAEL-based HQ was above 1 (21.6) and the Tier 2 CBR NOAEL-based HQ of 4.0 was also above 1 (**Table 7-15**). As discussed in **Appendix C**, there is considerable uncertainty associated with the CBR approach. There is also considerable uncertainty with the TrophicTrace® modeling approach used to estimate nickel concentrations in catfish tissue from levels in sediment. As shown in **Section 8.15**, measured nickel concentrations in brown bullheads collected from the Goose Prairie Creek portion of Caddo Lake were non-detect (and nickel was detected in Goose Prairie Creek sediment), strongly suggesting that modeled fish tissue concentrations (and the elevated CBR HQs) are not representative of actual conditions.

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated nickel concentrations measured in this watershed were consistent with background.

Results of the UPL and UTL comparisons showed that nickel was not elevated with respect to background; however, results of the WRS test showed that this inorganic chemical was potentially elevated with respect to background. The number of nickel sediment samples collected at this watershed was greater than that collected from the background data set (41 vs. 13 samples). The box and whisker plot shows that both the median and 75^{th} percentile concentrations are above the background concentrations for these two statistics.

In conclusion, nickel was not considered a final COPEC for the Harrison Bayou watershed because:

- All wildlife EEQs were estimated to be less than 1.
- Direct contact hazards were found to be acceptable.
- CBR-based HQs are not expected to be a concern, based on measured fish tissue concentrations of nickel showing non-detect results in Caddo Lake.

- Results of the UTL and UPL comparisons showed that nickel was not elevated with respect to background.
- Geochemical results indicated that concentrations are consistent with background.

10.2.8.4 Saunders Branch

Nickel was not selected as a final COPEC based on findings presented below.

The maximum nickel EEQ for aquatic receptors for this watershed was less than 1.

For direct contact, nickel concentrations were not a concern, as none of the direct contact sediment toxicity levels were exceeded (**Table 7-14**). For the CBR assessment, nickel concentrations were a concern, as the Tier 1 CBR NOAEL-based HQ was above 1 (19.8) and the Tier 2 CBR NOAEL-based HQ of 3.6 was also above 1 (**Table 7-15**). As discussed in **Appendix C**, there is considerable uncertainty associated with the CBR approach. There is also considerable uncertainty with the TrophicTrace® modeling approach used to estimate nickel concentrations in catfish tissue from levels in sediment. As shown in **Section 8.15**, measured nickel concentrations in brown bullheads collected from the Goose Prairie Creek portion of Caddo Lake were non-detect (and nickel was detected in Goose Prairie Creek sediment), strongly suggesting that modeled fish tissue concentrations (and the elevated CBR HQs) are not representative of actual conditions.

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated nickel concentrations measured in this watershed were consistent with background.

Results of the UPL and UTL comparisons and the WRS test showed that nickel was not elevated with respect to background. The number of nickel sediment samples collected at this watershed was similar to that collected from the background data set (14 vs. 13 samples). The box and whisker plot shows that both the median and 75^{th} percentile concentrations are above the background concentrations for these two statistics.

In conclusion, nickel was not considered a final COPEC for the Saunders Branch watershed because:

- All wildlife EEQs were estimated to be less than 1.
- Direct contact hazards were found to be acceptable.
- CBR-based HQs are not expected to be a concern, based on measured fish tissue concentrations of nickel showing non-detect results in Caddo Lake.

- Results of the UTL and UPL comparisons and results of the WRS test showed that nickel was not elevated with respect to background.
- Geochemical results indicated that concentrations are consistent with background.

10.2.9 Nitrate/Nitrite

This section summarizes all of the lines of evidence for nitrate/nitrite in sediment presented in the Step 3 evaluation, and provides a recommendation as to whether nitrate/nitrite should be carried forward to the BERA as a final COPEC. It should be noted that nitrate/nitrite may be a breakdown product of constituents known to be process related, such as TNT (**Section 1.3.10**).

10.2.9.1 Goose Prairie Creek

Nitrate/nitrite was not selected as a final COPEC based on findings presented below.

The maximum nitrate/nitrite EEQ for aquatic receptors for this watershed was less than 1.0. For the direct contact and CBR assessments, no sediment or CBR screening levels for nitrate/nitrite were available (**Tables 7-10** and **7-15**).

In conclusion, nitrate/nitrite is not a final COPEC for the Goose Prairie Creek watershed.

10.2.9.2 Central Creek

Nitrate/nitrite was not selected as a final COPEC based on findings presented below.

The maximum nitrate/nitrite EEQ for aquatic receptors for this watershed was less than 1.0. For the direct contact and CBR assessments, no sediment or CBR screening levels for nitrate/nitrite were available (**Tables 7-12** and **7-15**).

In conclusion, nitrate/nitrite is not a final COPEC for the Central Creek watershed.

10.2.9.3 Harrison Bayou

Nitrate/nitrite was not selected as a final COPEC based on findings presented below.

The maximum nitrate/nitrite EEQ for aquatic receptors for this watershed was 3.4 for the River Otter, based on the NOAEL Tier 1 approach. The other mammalian aquatic receptor (the Muskrat) had an EEQ that was less than 1.0. The Belted Kingfisher and Bank Swallow did not have EEQs estimated as TRVs were not readily available for avian receptors. The maximum Raccoon and Raccoon (Louisiana Black Bear) EEQs were also less than 1.0. For the River Otter, almost 100 percent of the estimated EEQ was associated with surface water, not sediment.

For the direct contact and CBR assessments, no sediment or CBR screening levels for nitrate/nitrite were available (**Tables 7-8** and **7-15**).

A spatial evaluation shows that elevated sediment concentrations, greater than or equal to 2.17 mg/kg for nitrate, are situated in two isolated areas within the watershed (**Appendix H**). This finding suggests that elevated detections of nitrate in sediment are not indicative of a major residual deposition area. (Nitrate/nitrite was not selected as a COPEC in sediment, although it was selected as a COPEC in surface water; therefore, results for nitrate were used instead.)

In conclusion, nitrate/nitrite was not considered a final COPEC for the Harrison Bayou watershed because:

- All sediment-associated wildlife EEQs were estimated to be less than 1.
- There is no evidence that either direct contact hazards or CBR HQs are a concern.
- Elevated detections of nitrate in sediment are not indicative of a major residual deposition area.

10.2.9.4 Saunders Branch

Nitrate/nitrite was not selected as a final COPEC based on findings presented below.

The maximum nitrate/nitrite EEQ for aquatic receptors for this watershed was less than 1.0, as this constituent was not selected as a COPEC for sediment.

For the direct contact and CBR assessments, no sediment or CBR screening levels for nitrate/nitrite were available (**Tables 7-14** and **7-15**).

In conclusion, nitrate/nitrite is not a final COPEC for the Saunders Branch watershed.

10.2.10 Silver

This section summarizes all of the lines of evidence for silver in sediment presented in the Step 3 evaluation, and provides a recommendation as to whether silver should be carried forward to the BERA as a final COPEC. Silver was used in the photographic laboratory at LHAAP (**Section 1.3.10**).

10.2.10.1 Goose Prairie Creek

Silver was selected as a final COPEC based on findings presented below.

The maximum silver EEQ for aquatic receptors for this watershed was less than 1.0.

For the direct contact and CBR assessments silver concentrations were a concern, as a majority of the available direct-contact sediment screening values were exceeded by both the Tier 1 and 2 concentrations (**Table 7-10**). The Tier 1 CBR NOAEL-based HQ was above 1 (39.8) and the Tier 2 CBR NOAEL-based HQ was also above 1 (30.8) (**Table 7-15**). As discussed in

Appendix C, there is considerable uncertainty associated with the CBR approach. There is also considerable uncertainty with the TrophicTrace® modeling approach used to estimate silver concentrations in catfish tissue from levels in sediment. As shown in **Section 8.15**, measured silver concentrations in brown bullheads were non-detect, strongly suggesting that modeled fish tissue concentrations (and the elevated CBR HQs) are not representative of actual conditions.

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that one silver sample (15 mg/kg from GPWSD03) should be considered a geochemical outlier because the concentration plotted above the linear trend line.

In conclusion, silver was considered a final COPEC for the Goose Prairie Creek watershed because:

- A majority of the available direct-contact sediment screening values were exceeded by both the Tier 1 and 2 concentrations.
- Results of the background geochemical analysis determined that the silver concentration from sample GPWSD03 (15 mg/kg) should be considered a geochemical outlier because the concentration plotted above the linear trend line.

10.2.10.2 Central Creek

Silver was not selected as a preliminary COPEC in sediment (**Table 6-28**). Therefore, silver is not a final COPEC for the Central Creek watershed.

10.2.10.3 Harrison Bayou

Silver was not selected as a preliminary COPEC in sediment (**Table 6-28**). Therefore, silver is not a final COPEC for the Harrison Bayou watershed.

10.2.10.4 Saunders Branch

Silver was not selected as a preliminary COPEC in sediment (**Table 6-28**). Therefore, silver is not a final COPEC for the Saunders Branch watershed.

10.2.11 Thallium

This section summarizes all of the lines of evidence for thallium in sediment presented in the Step 3 evaluation, and provides a recommendation as to whether thallium should be carried forward to the BERA as a final COPEC. It should be noted that thallium is not known to be related to any processes at LHAAP (**Section 1.3.10**).

10.2.11.1 Goose Prairie Creek

Thallium was selected as a final COPEC based on findings presented below.

The maximum thallium EEQ for aquatic receptors for this watershed was 53 for the River Otter, based on the NOAEL Tier 1 approach. This maximum EEQ was reduced to less than 1 for the NOAEL Tier 2 approach. Other aquatic receptors had the following EEQs: Belted Kingfisher (9.6); Muskrat (0.7); and Bank Swallow (0.4). The maximum Raccoon EEQ was 12.6 and the maximum Raccoon (Louisiana Black Bear) EEQ was 7.4. For the River Otter 0.7 percent of the EEQ was associated with sediment, for the Raccoon 27 percent of the EEQ was associated with sediment, and for the Belted Kingfisher 2 percent of the EEQ was associated with sediment. For these receptors, the sediment-associated EEQs were thus less than 1 for the River Otter (53 x 0.007 = 0.4) and the Belted Kingfisher (9.6 x 0.02 = 0.2), but above 1 for the Raccoon (12.6 x 0.27 = 3.4) and the Raccoon (Louisiana Black Bear) (7.4 x 0.27 = 2).

For the direct contact and CBR assessments, no sediment or CBR screening levels for thallium were available (**Tables 7-10** and **7-15**).

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that thallium concentrations measured in this watershed were naturally occurring (note that although background data for thallium are not available, because the geochemical evaluation evaluates plotted ratios of chemical concentrations within individual samples, background samples are not required for the geochemical evaluation).

UTL and UPL comparisons and the WRS test were not performed because thallium was not detected in the background data set.

A spatial evaluation shows that elevated sediment concentrations, greater than 0.541 mg/kg, are situated in two areas of Goose Prairie Creek Cove in Caddo Lake (with the North Cove area containing two samples with concentrations greater than 1.511 mg/kg) (**Appendix H**). This finding suggests that there is a depositional area of elevated thallium sediment concentrations within the North Cove area of Caddo Lake Goose Prairie Creek Cove.

In conclusion, thallium was considered a final COPEC for the Goose Prairie Creek watershed because:

- Wildlife sediment-associated EEQs were estimated to be above 1 (3.4 for the Raccoon and 2 for the Raccoon [Louisiana Black Bear]).
- Thallium was detected in watershed sediment, but was not detected in the background data set.
- Findings suggest that there is a depositional area of elevated thallium sediment concentrations within the North Cove area of Goose Prairie Creek Cove in Caddo Lake.

10.2.11.2 Central Creek

Thallium was selected as a final COPEC based on findings presented below.

The maximum thallium EEQ for aquatic receptors for this watershed was less than 1 based on the NOAEL Tier 1 approach. The maximum Raccoon EEQ was 3.5 and the maximum Raccoon (Louisiana Black Bear) EEQ was 2. For both of these receptors, 100 percent of the EEQ was associated with sediment.

For the direct contact and CBR assessments, no sediment or CBR screening levels for thallium were available (**Tables 7-12** and **7-15**).

Two of the 55 site samples analyzed for thallium had detectable concentrations of 1.74 and 4.11 mg/kg. None of the 28 background samples had detectable thallium concentrations, however, the reporting limits in the background samples ranged from 1.3 to 22 mg/kg with a mean of 8.2 mg/kg, compared to the site reporting limits which were in the range of 1 mg/kg. Thallium concentrations observed in the site samples would be non-detectable in the background samples based on these differences in reporting limits. Both of the site samples with detectable thallium concentrations were non-TAL samples, so they could not be evaluated using the geochemical approach (**Appendix F**).

UTL and UPL comparisons and the WRS test were not performed because thallium was not detected in the background data set.

A spatial evaluation shows that detected concentrations of thallium are not indicative of a major residual deposition area, as only three out of fifty samples had detected thallium concentrations. The two highest detected concentrations of 1.74 and 4.11 mg/kg were at isolated locations within the watershed, and the third detection of 0.519 mg/kg was in Caddo Lake southeast of the creek discharge point (**Appendix H**).

In conclusion, thallium was considered a final COPEC for the Central Creek watershed because:

- Wildlife sediment-associated EEQs were estimated to be above 1 (3.5 for the Raccoon and 2.3 for the Raccoon [Louisiana Black Bear]).
- Thallium was detected in watershed sediment, but was not detected in the background data set.

10.2.11.3 Harrison Bayou

Thallium was selected as a final COPEC based on findings presented below.

The maximum thallium EEQ for aquatic receptors for this watershed was 46 for the River Otter, based on the NOAEL Tier 1 approach. Other aquatic receptors had the following EEQs:

Muskrat (0.6); Bank Swallow (0.3), and Belted Kingfisher (4.3). The maximum Raccoon EEQ was 7 and the maximum Raccoon (Louisiana Black Bear) EEQ was 4.1. For these receptors, 3.4 percent of the EEQ was associated with sediment for the Belted Kingfisher, 1.3 percent for the River Otter, and 42 and 41 percent for the Raccoon and Raccoon (Louisiana Black Bear), respectively. These results translate to sediment-associated EEQs of 0.6 for the River Otter (46 x 0.013), 2.9 for the Raccoon (7.0 x 0.42), 1.7 for the Raccoon (Louisiana Black Bear) (1.9 x 0.42), and 1.5 for the Belted Kingfisher (4.3 x 0.34).

For the direct contact and CBR assessments, no sediment or CBR screening levels for thallium were available (**Tables 7-8** and **7-15**).

Two of the 41 site samples analyzed for thallium had detectable concentrations of 1.6 and 1.83 mg/kg. These concentrations were only slightly above their respective reporting limits. None of the 28 background samples had detectable thallium concentrations; however, reporting limits in the background samples ranged from 1.3 to 22 mg/kg with a mean of 8.2 mg/kg, compared to the site reporting limits which averaged 0.9 mg/kg. Thallium concentrations observed in the site samples would be non-detectable in the background samples based on these differences in reporting limits. Both of the site samples with detectable thallium concentrations are non-TAL samples, so they could not be evaluated using the geochemical approach (**Appendix F**).

UTL and UPL comparisons and the WRS test were not performed because thallium was not detected in the background data set.

A spatial evaluation shows that elevated sediment concentrations, greater than or equal to 1.055 mg/kg, are situated in three isolated areas within the watershed (**Appendix H**). This finding suggests that elevated detections of thallium in sediment are not indicative of a major residual deposition area.

In conclusion, thallium was considered a final COPEC for the Harrison Bayou watershed because:

- Wildlife sediment-associated EEQs were estimated to be above 1 (2.9 for the Raccoon, 1.7 for the Raccoon (Louisiana Black Bear), and 1.5 for the Belted Kingfisher).
- Thallium was detected in watershed sediment, but was not detected in the background data set.

10.2.11.4 Saunders Branch

Thallium was not selected as a preliminary COPEC in sediment (**Table 6-28**). Therefore, thallium is not a final COPEC for the Saunders Branch watershed.

10.2.12 Vanadium

This section summarizes all of the lines of evidence for vanadium in sediment presented in the Step 3 evaluation, and provides a recommendation as to whether vanadium should be carried forward to the BERA as a final COPEC. It should be noted that vanadium is not known to be related to any processes at the installation (**Section 1.3.10**).

10.2.12.1 Goose Prairie Creek

Vanadium was not selected as a preliminary COPEC in sediment (**Table 6-28**). Therefore, vanadium is not a final COPEC for the Goose Prairie Creek watershed.

10.2.12.2 Central Creek

Vanadium was not selected as a preliminary COPEC in sediment (**Table 6-28**). Therefore, vanadium is not a final COPEC for the Central Creek watershed.

10.2.12.3 Harrison Bayou

Vanadium was not selected as a preliminary COPEC in sediment (**Table 6-28**). Therefore, vanadium is not a final COPEC for the Harrison Bayou watershed.

10.2.12.4 Saunders Branch

Vanadium was not selected as a final COPEC based on findings presented below; however, it is retained on the background list for consideration by risk managers in Step 7.

The maximum vanadium EEQ for aquatic receptors for this watershed was 1.0 for the Muskrat, based on the NOAEL Tier 1 approach. Other aquatic receptors (River Otter, Bank Swallow, and Belted Kingfisher) had EEQs that were less than 1.0. The maximum Raccoon EEQ was 2.9 and the maximum Raccoon (Louisiana Black Bear) EEQ was 1.5. For the Muskrat almost 100 percent of the EEQ was associated with sediment and for the Raccoon 92 percent of the EEQ was associated with sediment. For these receptors, the sediment-associated EEQs were thus 1.0 for the Muskrat (1.0 x 1.0) and 2.7 for the Raccoon (2.9 x 0.92).

No sediment screening levels were available for vanadium for the direct contact assessment, (**Table 7-14**). For the CBR evaluation using the catfish as the modeled receptor, the Tier 1 NOAEL-based HQ exceeded 1 (11.6), and the Tier 2 NOAEL-based HQ of 2.7 also exceeded 1 (**Table 7-15**). As discussed in **Appendix C**, there is considerable uncertainty associated with the CBR approach. There is also considerable uncertainty with the TrophicTrace® modeling approach used to estimate vanadium concentrations in catfish tissue from levels in sediment. As shown in **Section 8.15**, measured vanadium concentrations in brown bullheads collected from the Goose Prairie Creek portion of Caddo Lake were non-detect (and vanadium was detected in

Goose Prairie Creek sediment), strongly suggesting that modeled fish tissue concentrations (and the elevated CBR HQs) are not representative of actual conditions.

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that vanadium concentrations measured in this watershed were consistent with background.

Results of the UTL and UPL comparisons, as well as the WRS test showed that vanadium was not elevated with respect to background. The box and whisker plot shows that both the median and 75th percentile concentrations are above the background concentrations for these two statistics.

The small mammal TRV (**Table 7-25**) used for both the Raccoon and the Muskrat was based on a chronic rat study in which the lowest dose was defined as the LOAEL. A UF of 0.1 was applied to this LOAEL to estimate a NOAEL for vanadium. The actual NOAEL could have occurred at a considerably greater dose level. If a UF of 0.5 was applied instead of 0.1, the estimated NOAEL EEQs would be reduced by a factor of 5, from 2.8 to 0.6. However, a UF of 0.1 is the recommended default value.

In conclusion, vanadium was not considered a final COPEC for the Saunders Branch watershed because:

- Except for the raccoon, all other wildlife sediment-associated EEQs were equal to or below 1.
- CBR-based HQs were not a concern, based on measured fish tissue concentrations of vanadium showing non-detected results in Caddo Lake.
- Geochemical results indicated the concentrations are consistent with background.
- Results of the UTL and UPL comparisons and WRS test showed that vanadium was not elevated with respect to background.
- No sediment or CBR values were available for assessing direct contact or fish ingestion pathway.

Vanadium is retained on the background list for consideration by risk managers in Step 7.

10.2.13 Zinc

This section summarizes all of the lines of evidence for zinc in sediment presented in the Step 3 evaluation, and provides a recommendation as to whether zinc should be carried forward to the BERA as a final COPEC. It should be noted that zinc is associated with general operations of the installation (**Section 1.3.10**).

10.2.13.1 Goose Prairie Creek

Zinc was not selected as a final COPEC based on findings presented below.

The maximum zinc EEQ for aquatic receptors for this watershed was 4.6 for the Belted Kingfisher, based on the NOAEL Tier 1 approach. The Bank Swallow EEQ was 2.2. Other aquatic receptors (River Otter, Muskrat, Raccoon, and Raccoon [Louisiana Black Bear]) had EEQs below 1.0. For the Belted Kingfisher and the Bank Swallow 20 percent and 95 percent, respectively, of the EEQ was associated with sediment. For these receptors, the sediment-associated EEQs were thus 0.9 for the Belted Kingfisher (4.6 x 0.20) and 2.1 for the Bank Swallow (2.2 x 0.95).

For the direct contact assessment, zinc concentrations were not a concern (**Table 7-10**), as none of the available direct-contact sediment screening values were exceeded. For the CBR evaluation, zinc concentrations were a concern, as the Tier 1 CBR NOAEL-based HQ was above 1 (8.8) and the Tier 2 CBR NOAEL-based HQ was also above 1 (1.9) (**Table 7-15**). As discussed in **Appendix C**, there is considerable uncertainty associated with the CBR approach. There is also considerable uncertainty with the TrophicTrace® modeling approach used to estimate zinc concentrations in catfish tissue from levels in sediment. As shown in **Section 8.15**, the maximum measured zinc concentration in brown bullheads was 9-times lower than the modeled Tier 1 concentration, strongly suggesting that modeled fish tissue concentrations (and the elevated CBR HQs) are not representative of actual conditions.

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that eight zinc samples were geochemical outliers, and one non-TAL sample should be considered a potential concern because the concentration exceeded the background screening concentration.

Results of the UTL and UPL comparisons and the WRS test showed that zinc was potentially elevated with respect to background. Given the number of zinc sediment samples collected at this watershed compared with the background data set (58 vs. 13 samples), the UTL and UPL findings are not unexpected. As the site data set is much larger than the background data set, the identification, by chance alone, of detecting higher concentrations in the site samples than in background samples, is quite likely. The box and whisker plot shows that both the median and 75^{th} percentile concentrations are above the background concentrations for these two statistics.

Sediment to aquatic invertebrate BCFs used for modeling zinc were 7.5 for the Tier 1 assessment and 1.9 for the Tier 2 assessment, representing 90^{th} percentile and median values from Bechtel Jacobs (1998). These BCF values were developed by Bechtel Jacobs (1998) for use in screening level ERAs performed on the Oak Ridge Reservation and therefore, may be overly conservative for the Step 3 assessment performed herein. Bechtel Jacobs (1998) recommends that the degree of overestimation can be minimized by calculating a 95% UPL based on their reported depurated zinc tissue results and their BCF regression equation. This calculation is as follows:

$$UPL = \hat{y} \pm t_{\alpha = 0.05, df = n-2} \times RMSE \times \sqrt{1 + \frac{1}{n} + \frac{(x^* - \bar{x})^2}{S_{xx}}}$$

Where:

$\hat{y}$ = log-transformed tissue concentration = a’ + b(log x), with:

a’ = regression equation intercept from Bechtel Jacobs Table 3 (1.89)

b = regression equation slope from Bechtel Jacobs Table 3 (0.126)

x = zinc sediment concentration (94.1 mg/kg for GPC), and

$\hat{y}$ = 2.14 (calculated)

$t_{\alpha = 0.05, df = n-2}$ = 1.706 (from Bechtel Jacobs Appendix A Table A-1),

RMSE = 0.193 (root mean square error from Bechtel Jacobs Appendix A Table A-1),

n = 28 (from Bechtel Jacobs Appendix A Table A-1),

x* = log-transformed zinc sediment concentration from GPC (log 94.1 = 1.97),

$\bar{x}$ = 2.222 (mean log-transformed sediment concentration for regression model from Bechtel Jacobs Appendix A Table A-1), and

S_{xx} = -132.81 (variance of sediment concentrations for regression model from Bechtel Jacobs Appendix A Table A-1).

Thus:

UPL = 298.5 mg/kg (back-transformed from the initial log result of 2.475).

Therefore, the alternative zinc BCF = 298.5 mg/kg / 94.1 mg/kg = 3.17

Another alternate zinc BCF value of 2.85 is available from USEPA (1999). This BCF was based on field studies where chironomid and ephemeroptera aquatic invertebrates were exposed to zinc in sediments. Either one of these alternative BCFs (i.e., 3.17 or 2.85) is more appropriate for the Step 3 Report because the original BCF of 7.5 is a conservative upper-bound BCF recommended only for Steps 1 or 2 of a SLERA. If the estimated 95% UPL or the alternative BCF from USEPA (1999) is used, the Tier 1 EEQ for the Bank Swallow would be reduced by approximately 2.4-fold or 2.6-fold, respectively. Use of either of these alternative BCF values would reduce the Tier 1 Bank Swallow sediment-associated EEQ from 2.1 to less than 1.

A spatial evaluation shows that elevated sediment concentrations, greater than or equal to 63 mg/kg, are situated in two areas of Goose Prairie Creek Cove in Caddo Lake (with the North Cove area containing four samples with concentrations greater than 105 mg/kg) and at fifteen other somewhat isolated locations within the watershed (**Appendix H**). This finding suggests that there is a depositional area of elevated zinc sediment concentrations within the North Cove area of Caddo Lake Goose Prairie Creek Cove.

In conclusion, zinc was not considered a final COPEC for the Goose Prairie Creek watershed because:

- The maximum wildlife sediment-associated EEQ was below 1 taking into consideration alternative sediment-to-aquatic invertebrate BAFs.
- The wildlife sediment-associated EEQs for all other wildlife receptors were below 1.
- Direct-contact HQs were not a concern.
- CBR-based HQs were not a concern, based on measured fish tissue concentrations of zinc showing results 9-fold lower than the Tier 1 modeled concentration.

10.2.13.2 Central Creek

Zinc was not selected as a final COPEC based on findings presented below.

The maximum zinc EEQ for aquatic receptors for this watershed was less than 1.0.

For the direct contact assessment zinc concentrations were not a concern, as none of the available direct-contact sediment screening values were exceeded (**Table 7-12**). For the CBR evaluation, zinc concentrations were a concern, as the Tier 1 CBR NOAEL-based HQ was above 1 (3.6). The Tier 2 CBR NOAEL-based HQ, however, was below 1 (0.8) (**Table 7-15**). As discussed in **Appendix C**, there is considerable uncertainty associated with the CBR approach. There is also considerable uncertainty with the TrophicTrace® modeling approach used to estimate zinc concentrations in catfish tissue from levels in sediment. As shown in **Section 8.15**, the maximum measured zinc concentration in brown bullheads collected from the Goose Prairie Creek portion of Caddo Lake was 9-fold lower than the modeled Tier 1 concentration (and zinc was detected in Goose Prairie Creek sediment), strongly suggesting that modeled fish tissue concentrations (and the elevated CBR HQs) are not representative of actual conditions.

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that zinc concentrations measured in this watershed were consistent with background.

Results of the UPL comparison and the WRS test showed that zinc was potentially elevated with respect to background; however, results of the UTL comparison showed that this inorganic chemical was not elevated with respect to background. Given the number of zinc sediment samples collected at this watershed compared with the background data set (36 vs. 13 samples), the UPL finding is not unexpected. As the site data set is much larger than the background data set, the identification, by chance alone, of detecting higher concentrations in the site samples than in background samples, is quite likely. The box and whisker plot shows that both the median and 75th percentile concentrations are above the background concentrations for these two statistics.

A spatial evaluation shows that five sediment sample locations have elevated concentrations greater than 65.2 mg/kg, and are situated in two areas of Caddo Lake on either side of the creek discharge point (**Appendix H**). However, of these samples, only one had a concentration slightly above 81.4 mg/kg (the 75th quantile), thus, these data do not appear to be indicative of a major residual deposition area. However, it should be noted that the sediment MDC was lower than the Clinton Lake background UTL of 189 mg/kg (Shaw, 2004b).

In conclusion, zinc was not considered a final COPEC for the Central Creek watershed because:

- Wildlife EEQs were less than 1.0.
- Geochemical results indicated the concentrations are consistent with background.
- The sediment MDC was lower than the Clinton Lake background UTL.
- Results of the UTL comparisons showed that zinc was not elevated with respect to background.
- Direct contact hazards were found to be acceptable.
- CBR-based HQs were not a concern, based on measured fish tissue concentrations of zinc showing results 9-fold lower than the Tier 1 modeled concentration.
- Elevated detections of zinc in sediment are not indicative of a major residual deposition area.

10.2.13.3 Harrison Bayou

Zinc was not selected as a final COPEC based on findings presented below.

The maximum zinc EEQ for aquatic receptors for this watershed was less than 1.0.

For the direct contact assessment, zinc concentrations were not a concern, as none of the available direct-contact sediment screening values were exceeded (**Table 7-8**). For the CBR evaluation, zinc concentrations were a concern as the Tier 1 CBR NOAEL-based HQ was above

1 (3.3). The Tier 2 CBR NOAEL-based HQ, however, was below 1 (0.8) (**Table 7-15**). As discussed in **Appendix C**, there is considerable uncertainty associated with the CBR approach. There is also considerable uncertainty with the TrophicTrace® modeling approach used to estimate zinc concentrations in catfish tissue from levels in sediment. As shown in **Section 8.15**, the maximum measured zinc concentration in brown bullheads collected from the Goose Prairie Creek portion of Caddo Lake was 9-fold lower than the modeled Tier 1 concentration (and zinc was detected in Goose Prairie Creek sediment), strongly suggesting that modeled fish tissue concentrations (and the elevated CBR HQs) are not representative of actual conditions.

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that zinc concentrations measured in this watershed were consistent with background.

Results of the UTL and UPL comparisons showed that zinc was not elevated with respect to background; however, results of the WRS test showed that this inorganic chemical was potentially elevated with respect to background. The number of zinc sediment samples collected at this watershed was greater than those collected from the background data set (28 vs. 13 samples). The box and whisker plot shows that both the median and 75th percentile concentrations are above the background concentrations for these two statistics.

In conclusion, zinc was not considered a final COPEC for the Harrison Bayou watershed because:

- Wildlife EEQs were less than 1.0.
- Geochemical results indicated the concentrations are consistent with background.
- Results of the UTL and UPL comparisons showed that zinc was not elevated with respect to background.
- Direct contact hazards were found to be acceptable.
- CBR-based HQs were not a concern, based on measured fish tissue concentrations of zinc showing results 9-fold lower than the Tier 1 modeled concentration.

10.2.13.4 Saunders Branch

Zinc was not selected as a final COPEC based on findings presented below.

The maximum zinc EEQ for aquatic receptors for this watershed was 1.25 for the Bank Swallow, based on the NOAEL Tier 1 approach. Other aquatic receptors (Belted Kingfisher, River Otter, and Muskrat) had EEQs that were less than 1.0. The maximum Raccoon and Raccoon (Louisiana Black Bear) EEQs were also less than 1.0. For the Bank Swallow 92 percent of the EEQ was associated with sediment, specifically 91 percent for the ingestion of aquatic invertebrates. For this receptor, the sediment-associated EEQ was thus 1.15 for the Bank Swallow (1.25 x 0.92).

For the direct contact assessment, zinc concentrations were not a concern, as none of the available direct-contact sediment screening values were exceeded (**Table 7-14**). For the CBR evaluation, zinc concentrations were a concern as the Tier 1 CBR NOAEL-based HQ was above 1 (4.8). The Tier 2 CBR NOAEL-based HQ, however, was equal to 1. (**Table 7-15**). As discussed in **Appendix C**, there is considerable uncertainty associated with the CBR approach. There is also considerable uncertainty with the TrophicTrace® modeling approach used to estimate zinc concentrations in catfish tissue from levels in sediment. As shown in **Section 8.15**, the maximum measured zinc concentration in brown bullheads collected from the Goose Prairie Creek portion of Caddo Lake was 9-fold lower than the modeled Tier 1 concentration (and zinc was detected in Goose Prairie Creek sediment), strongly suggesting that modeled fish tissue concentrations (and the elevated CBR HQs) are not representative of actual conditions.

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that zinc concentrations measured in this watershed were consistent with background.

Results of the UPL comparison and the WRS test showed that zinc was potentially elevated with respect to background; however, results of the UTL comparison showed that this inorganic chemical was not elevated with respect to background. The number of zinc sediment samples collected at this watershed was less than those collected from the background data set (8 vs. 13 samples). The box and whisker plot shows that both the median and 75th percentile concentrations are above the background concentrations for these two statistics.

In conclusion, zinc was not considered a final COPEC for the Saunders Branch watershed because:

- The maximum wildlife sediment-associated NOAEL-based based EEQ was essentially equal to 1.0 (i.e., 1.15).
- All other aquatic receptors had EEQs that were estimated to be less than 1.0.
- Geochemical results indicated the concentrations are consistent with background.
- Results of the UTL comparisons showed that zinc was not elevated with respect to background.
- Direct contact hazards were found to be acceptable
- CBR-based HQs were not a concern, based on measured fish tissue concentrations of zinc showing results 9-fold lower than the Tier 1 modeled concentration.

10.2.14 Bis(2-ethylhexyl)phthalate

This section summarizes all of the lines of evidence for BEHP in sediment presented in the Step 3 evaluation, and provides a recommendation as to whether BEHP should be carried forward to the BERA as a final COPEC. It should be noted that BEHP is not known to be related to any processes at the installation (**Section 1.3.10**), and is a common laboratory contaminant.

10.2.14.1 Goose Prairie Creek

BEHP was not selected as a COPEC in sediment. The maximum BEHP EEQ for aquatic receptors for this watershed was 4.15 for the Bank Swallow, based on the NOAEL Tier 1 approach. However, 100 percent of this hazard was from the ingestion of fish that may bioaccumulate BEHP from surface water. All the other aquatic receptors, including the Raccoon and Raccoon (Louisiana Black Bear), had EEQs that were less than 1.0.

In conclusion, BEHP is not considered a final COPEC for the Goose Prairie Creek watershed, because sediment-associated wildlife EEQs are less than 1.

10.2.14.2 Central Creek

BEHP was not selected as a preliminary COPEC in sediment (**Table 6-28**). Therefore, BEHP is not a final COPEC for the Central Creek watershed.

10.2.14.3 Harrison Bayou

BEHP was not selected as a final COPEC based on findings presented below.

The maximum BEHP EEQ for aquatic receptors, including the Raccoon and Raccoon (Louisiana Black Bear), for this watershed was less than 1, based on the NOAEL Tier 1 approach.

For direct contact, BEHP concentrations were a concern, because under both the Tier 1 and Tier 2 approaches, one of the two direct-contact toxicity screening levels was exceeded (**Table 7-8**). For the CBR assessment, however, BEHP concentrations were not a concern because CBR HQs were less than 1 (**Table 7-15**).

A spatial evaluation shows that elevated sediment concentrations, greater than or equal to 0.293 mg/kg, are situated in two isolated areas within the watershed (**Appendix H**). This finding suggests that elevated detections of BEHP in sediment are not indicative of a major residual deposition area.

In conclusion, BEHP was not considered a final COPEC for the Harrison Bayou watershed because:

- Aquatic receptors had EEQs that were estimated to be less than 1.0.
- CBR HQs were estimated to be less than 1.
- Elevated detections of BEHP in sediment are not indicative of a major residual deposition area.
- It is probable that the detections of this COPEC are the result of laboratory contamination, as BEHP is a common laboratory contaminant. However, BEHP was detected at concentrations more than 10 times the concentrations found in associated blanks.

10.2.14.4 Saunders Branch

BEHP was not selected as a final COPEC based on findings presented below.

The maximum BEHP EEQ for aquatic receptors, including the Raccoon and Raccoon (Louisiana Black Bear), for this watershed was less than 1, based on the NOAEL Tier 1 approach.

For direct contact, BEHP concentrations were a concern, because under both the Tier 1 and Tier 2 approaches, one of the two direct-contact toxicity screening levels was exceeded (**Table 7-14**). For the CBR assessment, however, BEHP concentrations were not a concern because CBR HQs were less than 1 (**Table 7-15**).

A spatial evaluation shows that two elevated sediment concentrations, greater than or equal to 0.434 mg/kg, are situated at two isolated locations within the watershed (**Appendix H**). This finding suggests that elevated detections of BEHP in sediment are not indicative of a major residual deposition area.

In conclusion, BEHP was not considered a final COPEC for the Saunders Branch watershed because:

- Aquatic receptors had EEQs that were estimated to be less than 1.0.
- CBR HQs were estimated to be less than 1.
- Elevated detections of BEHP in sediment are not indicative of a major residual deposition area.
- It is probable that the detections of this COPEC are the result of laboratory contamination, as BEHP is a common laboratory contaminant. However, BEHP was detected at concentrations more than 10 times the concentrations found in associated blanks.

10.2.15 2,3,7,8-TCDD TEQ

This section summarizes all of the lines of evidence for 2,3,7,8-TCDD TEQ in sediment presented in the Step 3 evaluation, and provides a recommendation as to whether the chemical should be carried forward to the BERA as a final COPEC. It should be noted that there are no known sources of dioxin as a result of installation processes or application (**Section 1.3.10**). Chlorinated organics, such as dioxin, are produced through natural as well as man made processes. Significant amounts of dioxin are produced by nature in peat bogs, during volcanic eruptions, from forest fires, or wherever compounds containing hydrogen, carbon and chlorine are burned. Forest fires may be the single largest source of dioxin in the environment (Gribble, 1994). More than half of the total area at the installation has been subjected to controlled burns to limit vegetation growth since 1975 (Lanis Rieger, Installation Forester, personal communication).

10.2.15.1 Goose Prairie Creek

2,3,7,8-TCDD TEQ was not selected as a final COPEC based on findings presented below.

The maximum 2,3,7,8-TCDD TEQ EEQ for aquatic receptors for this watershed was 21.1 for the River Otter, based on the NOAEL Tier 1 approach. However, 100 percent of this hazard was from the ingestion of fish that may bioaccumulate TCDD from surface water. Other aquatic receptors had the following EEQs: Belted Kingfisher (12.8); and Muskrat and Bank Swallow (both less than 1). For the Belted Kingfisher less than 1 percent of the hazard was from sediment exposure (i.e., aquatic invertebrate ingestion). The maximum Raccoon EEQ was 5.5 and the maximum Raccoon (Louisiana Black Bear) EEQ was 3.2; however, only approximately 5 percent of this hazard was from sediment exposure (i.e., aquatic invertebrate ingestion).

For the direct contact assessment and CBR evaluation, none of the available evaluation criteria suggested adverse ecological impacts to aquatic receptors (**Tables 7-10** and **7-15**).

A geochemical analysis was not performed for TCDD as it is not expected to complex with inorganic constituents.

Results of the UTL and UPL comparisons showed that 2,3,7,8-TCDD TEQ was potentially elevated with respect to background. The number of 2,3,7,8-TCDD sediment samples collected in this watershed and in the background data set was similar (10 vs. 13 samples). The WRS test results showed that 2,3,7,8-TCDD TEQ was not elevated with respect to background. The box and whisker plot shows that both the median and 75th percentile concentrations are above the background concentrations for these two statistics. Additional information on individual TCDD congeners is provided in **Appendix F**.

A spatial evaluation shows that elevated sediment concentrations, greater than or equal to 1.9E-06 mg/kg, are located in four isolated areas within the watershed (**Appendix H**). This finding suggests that elevated detections of 2,3,7,8-TCDD TEQ in sediment are not indicative of a major residual deposition area.

In conclusion, 2,3,7,8-TCDD TEQ was not considered a final COPEC for the Goose Prairie Creek watershed because:

- All sediment-associated wildlife EEQs were estimated to be less than 1.
- Results of the WRS test indicate that concentrations are consistent with background.
- Direct contact hazards and CBR HQs were estimated to be acceptable.
- Elevated detections of 2,3,7,8-TCDD TEQ in sediment are not indicative of a major residual deposition area.

10.2.15.2 Central Creek

2,3,7,8-TCDD TEQ was not selected as a final COPEC based on findings presented below.

The maximum 2,3,7,8-TCDD TEQ EEQ for aquatic receptors for this watershed was 32 for the River Otter, based on the NOAEL Tier 1 approach. However, less than 1 percent of this hazard was from the ingestion of sediment-associated prey. Other aquatic receptors had the following EEQs: Belted Kingfisher (18.4); Bank Swallow (1.1), and Muskrat (less than 1). For the Belted Kingfisher 1.3 percent of the hazard was from sediment exposure (i.e., aquatic invertebrate ingestion) (Belted Kingfisher EEQ = 18.4 x 0.013 = 0.24). For the Bank Swallow 52 percent of the hazard was from sediment exposure (i.e., aquatic invertebrate ingestion) (Bank Swallow EEQ = 1.1 x 0.52 = 0.6). The maximum Raccoon EEQ was 19, however, only approximately 8 percent of this hazard was from sediment exposure (i.e., aquatic invertebrate ingestion), resulting in an estimated sediment EEQ of 1.5 (19 x 0.08). The maximum Raccoon (Louisiana Black Bear) EEQ was 4.9, however, only approximately 18 percent of this hazard was from sediment exposure (i.e., aquatic invertebrate ingestion), resulting in an estimated sediment EEQ of 0.9 (4.9 x 0.18).

For the direct contact assessment, two out of the three available sediment screening criteria were exceeded under both the Tier 1 and 2 approaches (**Table 7-12**), and for the CBR evaluation, the catfish Tier 1 and 2 NOAEL and LOAEL HQs were estimated to be below 1 (**Table 7-15**). Although direct contact hazards are a potential concern, the Canadian probable effect level is not exceeded.

A geochemical analysis was not performed for TCDD as it is not expected to complex with inorganic constituents.

Results of the UTL and UPL comparisons, and the WRS test, showed that 2,3,7,8-TCDD TEQ was potentially elevated with respect to background. The number of TCDD sediment samples collected in this watershed and in the background data set was somewhat similar (8 vs. 13 samples). The box and whisker plot shows that both the median and 75th percentile concentrations are above the background concentrations for these two statistics. Additional information on individual TCDD congeners is provided in **Appendix F**.

A spatial evaluation shows that elevated sediment concentrations, greater than or equal to 2.1E-6 mg/kg, are situated in two areas of Caddo Lake on either side of the creek discharge point (with one and two sample locations, respectively) and at one isolated location within the watershed (**Appendix H**). This finding suggests that elevated detections of 2,3,7,8-TCDD TEQ in sediment are not indicative of a major residual deposition area.

In conclusion, 2,3,7,8-TCDD TEQ was not considered a final COPEC for the Central Creek watershed because:

- The maximum sediment-associated wildlife NOAEL-based EEQ was estimated to be essentially 1 (i.e., 1.5).
- All other wildlife sediment-associated EEQs were estimated to be less than 1.
- CBR HQs were estimated to be acceptable.
- Elevated detections of 2,3,7,8-TCDD TEQ in sediment are not indicative of a major residual deposition area.

10.2.15.3 Harrison Bayou

2,3,7,8-TCDD TEQ was not selected as a final COPEC based on findings presented below.

The maximum 2,3,7,8-TCDD TEQ EEQ for aquatic receptors for this watershed was 45 for the River Otter, based on the NOAEL Tier 1 approach. However, only 1.1 percent of this hazard was from the ingestion of sediment-associated prey. Other aquatic receptors had the following EEQs: Belted Kingfisher (14.4); Bank Swallow (1.5); and Muskrat (less than 1). For the Belted Kingfisher less than 3 percent of the hazard was from sediment exposure (i.e., aquatic invertebrate ingestion). For the Bank Swallow 63 percent of the hazard was from sediment exposure (i.e., aquatic invertebrate ingestion). The maximum Raccoon EEQ was 18.8 and the maximum Raccoon (Louisiana Black Bear) EEQ was 2.7, however, only 13 percent of this hazard was from sediment exposure (i.e., aquatic invertebrate ingestion). For these receptors, the sediment-associated EEQs were thus all less than 1, except for the raccoon (e.g., 45 x 0.011 = 0.5; 14.4 x 0.03 = 0.4; 1.5 x 0.63 = 0.9; and 18.8 x 0.13 = 2.4).

For the direct contact assessment, two out of the three available sediment screening criteria were exceeded under both the Tier 1 and 2 approaches (**Table 7-8**), and for the CBR evaluation, the catfish Tier 1 and 2 NOAEL and LOAEL HQs were estimated to be below 1 (**Table 7-15**). Although direct contact hazards are a potential concern, the Canadian probable effect level, which is a concentration more definitively associated with adverse effects than threshold effects levels, is not exceeded.

A geochemical analysis was not performed for TCDD as it is not expected to complex with inorganic constituents.

Results of the UTL and UPL comparisons, and the WRS test, showed that 2,3,7,8-TCDD TEQ was potentially elevated with respect to background. The number of TCDD sediment samples collected in this watershed was lower than in the background data set (5 vs. 13 samples). The box and whisker plot shows that both the median and 75th percentile concentrations are above the background concentrations for these two statistics. Additional information on individual TCDD congeners is provided in **Appendix F**.

A spatial evaluation shows that four elevated sediment concentrations, greater than or equal to 2.08E-06 mg/kg, are situated in isolated areas within the watershed (**Appendix H**). This finding suggests that elevated detections of 2,3,7,8-TCDD TEQ in sediment are not indicative of a major residual deposition area.

In conclusion, 2,3,7,8-TCDD TEQ was not considered a final COPEC for the Harrison Bayou watershed because:

- The maximum sediment-associated wildlife NOAEL-based EEQ was estimated to be relatively low (i.e., 2.4).
- All other wildlife sediment-associated EEQs were estimated to be less than 1.
- CBR HQs were estimated to be acceptable.
- Elevated detections of 2,3,7,8-TCDD TEQ in sediment are not indicative of a major residual deposition area.

10.2.15.4 Saunders Branch

2,3,7,8-TCDD TEQ was not selected as a final COPEC based on findings presented below.

The maximum 2,3,7,8-TCDD TEQ EEQ for aquatic receptors for this watershed was less than 1.0, based on the NOAEL Tier 1 approach. The maximum Raccoon EEQ was 1.8 and the maximum Raccoon (Louisiana Black Bear) EEQ was 1.1. Approximately 63 percent of the hazard for both receptors was from sediment exposure (i.e., aquatic invertebrate ingestion), resulting in a sediment-associated EEQs of 1.1 (1.8 x 0.63) and 0.7 (1.1 x 0.63) for the Raccoon and Raccoon (Louisiana Black Bear), respectively.

For the direct contact assessment, two out of the three available sediment screening criteria were exceeded under both the Tier 1 and 2 approaches (**Table 7-14**) and for the CBR evaluation, the catfish Tier 1 and 2 NOAEL and LOAEL HQs were estimated to be below 1 (**Table 7-15**). Although direct contact hazards are a potential concern, the Canadian probable effect level is not exceeded.

A geochemical analysis was not performed for TCDD as it is not expected to complex with inorganic constituents.

Results of the UTL and UPL comparisons showed that 2,3,7,8-TCDD TEQ was potentially elevated with respect to background. The number of TCDD sediment samples collected in this watershed was much lower than in the background data set (1 vs. 13 samples). The WRS test could not be run as only one sample was collected from the watershed. Additional information on individual TCDD congeners is provided in **Appendix F**.

A spatial evaluation shows that the one detected sediment concentration of 6.98E-06 mg/kg 2,3,7,8-TCDD TEQ is situated in Caddo Lake immediately adjacent to the creek discharge point (**Appendix H**).

In conclusion, 2,3,7,8-TCDD TEQ was not considered a final COPEC for the Saunders Branch watershed because:

- The maximum sediment-associated wildlife NOAEL-based EEQ was estimated to be essentially 1 (i.e., 1.1).
- All other wildlife sediment-associated EEQs were estimated to be less than 1.
- CBR HQs were estimated to be acceptable.
- Elevated detections of 2,3,7,8-TCDD TEQ in sediment are not indicative of a major residual deposition area.

10.3 Surface Water

This section presents surface water COPECs, as defined previously in **Section 10.0**. To identify EEQs in surface water, results for aquatic receptors (Belted Kingfisher, Muskrat, River Otter, and Bank Swallow) are used (**Tables 7-26** through **7-33**). Results from the raccoon (and the Raccoon [Louisiana Black Bear]), a facultative terrestrial and aquatic species, are also considered. Direct contact and fish CBR HQs are also discussed. Because exposure for all receptors is modeled separately for each possible sub-area/watershed combination (e.g., Goose

Prairie Creek runs through the Low Impact Sub-Area and the Industrial Sub-Area, total exposure to COPECs in this watershed is estimated by reviewing results from both sub-areas). EEQs presented in this section are for the most exposed watershed and sub-area combination.

10.3.1 Aluminum

This section summarizes all of the lines of evidence for aluminum in surface water presented in the Step 3 evaluation, and provides a recommendation as to whether the chemical should be carried forward to the BERA as a final COPEC. It should be noted that aluminum is known to be process related (**Section 1.3.10**).

10.3.1.1 Goose Prairie Creek

Aluminum was not selected as a final COPEC based on findings presented below; however, it is retained on the background list for consideration by risk managers in Step 7.

The maximum aluminum EEQ for aquatic receptors for this watershed was 38 for the Muskrat, based on the NOAEL Tier 1 approach. Other aquatic receptors had the following EEQs: River Otter (21); Bank Swallow (18); and Belted Kingfisher (8.1). The maximum Raccoon EEQ was 206 and the maximum Raccoon (Louisiana Black Bear) EEQ was 113. For all these receptor except the River Otter, whose contribution from surface water was 1.5 percent, much less than 1 percent of the hazard was associated with surface water exposure (considering either fish ingestion or surface water ingestion), therefore, all of the surface water-associated EEQs were less than 1.0.

For the CBR evaluation, none of the estimated HQs for the fathead minnow were above 1, suggesting no adverse ecological impacts to aquatic receptors (**Table 7-15**). For the direct contact assessment a majority of the available direct contact screening values were exceeded, including promulgated criteria, suggesting adverse impacts to aquatic receptors (**Table 7-9**).

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that aluminum concentrations measured in this watershed were consistent with background.

Results of the UTL and UPL comparisons showed that aluminum was potentially elevated with respect to background, however, given the number of aluminum surface water samples collected at this watershed compared with the background data set (35 vs. 13 samples), this finding is not unexpected. As the site data set is much larger than the background data set, the identification, by chance alone, of detecting higher concentrations in the site samples than in background samples, is quite likely. Results of the WRS test showed that aluminum was not elevated with respect to background. The box and whisker plot shows that the 75th percentile concentration for the site is above the background, however, the median concentrations are very similar.

A spatial evaluation shows that elevated concentrations of aluminum (11 mg/L) are limited to one sample location in the upper portion of the watershed (**Appendix H**) and this location does not match the location of elevated concentrations in sediment.

In conclusion, aluminum was not considered a final COPEC for the Goose Prairie Creek watershed because:

- All wildlife surface water-associated EEQs were estimated to be less than 1.
- CBR HQs were estimated to be acceptable.
- Results of the WRS test showed that aluminum was not elevated with respect to background.
- Geochemical results indicated the concentrations are consistent with background.

Aluminum is retained on the background list for consideration by risk managers in Step 7.

10.3.1.2 Central Creek

Aluminum was not selected as a final COPEC based on findings presented below; however, it is retained on the background list for consideration by risk managers in Step 7.

The maximum aluminum EEQ for aquatic receptors for this watershed was 36 for the Muskrat, based on the NOAEL Tier 1 approach. Other aquatic receptors had the following EEQs: River Otter (21); Bank Swallow (17); and Belted Kingfisher (7.6). The maximum Raccoon EEQ was 198 and the maximum Raccoon (Louisiana Black Bear) EEQ was 26. For all these receptor, much less than 1 percent of the hazard was associated with surface water exposure (considering either fish ingestion or surface water ingestion), therefore, all of the surface water-associated EEQs were less than 1.0.

For the CBR evaluation, none of the estimated HQs for the fathead minnow were above 1, suggesting no adverse ecological impacts to aquatic receptors (**Table 7-15**). For the direct contact assessment a majority of the available direct contact screening values were exceeded, including promulgated criteria, suggesting adverse impacts to aquatic receptors (**Table 7-11**).

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that aluminum concentrations measured in this watershed were consistent with background.

Results of the UTL and UPL comparisons showed that aluminum was potentially elevated with respect to background. The number of aluminum surface water samples collected at this watershed was lower than that collected at the background data set (9 vs. 13 samples). Results of the WRS test determined that aluminum is not elevated with respect to background. The box and whisker plot shows that both the median and 75th percentile concentrations are slightly above the background concentrations for these two statistics.

A spatial evaluation shows that two elevated concentrations of aluminum, greater than or equal to 8.4 mg/L are located within isolated areas of the watershed (**Appendix H**) and these locations do not match the locations of elevated concentrations in sediment.

In conclusion, aluminum was not considered a final COPEC for the Central Creek watershed because:

- All wildlife surface water-associated EEQs were estimated to be less than 1.
- CBR HQs were estimated to be acceptable.
- Results of the WRS test showed that aluminum was not elevated with respect to background.
- Geochemical results indicated the concentrations are consistent with background.

Aluminum is retained on the background list for consideration by risk managers in Step 7.

10.3.1.3 Harrison Bayou

Aluminum was not selected as a final COPEC based on findings presented below; however, it is retained on the background list for consideration by risk managers in Step 7.

The maximum aluminum EEQ for aquatic receptors for this watershed was 41 for the River Otter, based on the NOAEL Tier 1 approach. Other aquatic receptors had the following EEQs: Muskrat (39); Bank Swallow (18); and Belted Kingfisher (8.2). The maximum Raccoon EEQ was 210 and the maximum Raccoon (Louisiana Black Bear) EEQ was 28. For all receptors except the River Otter and Muskrat, much less than 1 percent of the hazard was associated with surface water exposure (considering either fish ingestion or surface water ingestion), and EEQs were less than 1.0. For the River Otter and Muskrat, 4.4 percent and 2.7 percent of their respective EEQs were associated with surface water. Thus, the resulting surface water EEQs were 1.8 (41 x 0.044) for the River Otter, and 1.1 (39 x 0.027) for the Muskrat.

For the CBR evaluation, only one of the estimated HQs for the fathead minnow was above 1 (1.4 for the NOAEL-based Tier 1 approach), suggesting limited adverse ecological impacts to aquatic receptors (**Table 7-15**). As shown in **Section 8.15**, measured aluminum concentrations in sunfish collected from the Goose Prairie Creek portion of Caddo Lake were non-detect, suggesting that modeled fish tissue concentrations (and the elevated CBR HQs) are not representative of actual conditions.

For the direct contact assessment a majority of the available direct contact screening values were exceeded, including promulgated criteria, suggesting adverse impacts to aquatic receptors (**Table 7-7**).

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that aluminum concentrations measured in this watershed were consistent with background.

Results of the UTL and UPL comparisons showed that aluminum was potentially elevated with respect to background. The number of aluminum surface water samples collected from this watershed was lower than collected from the background data set (6 vs. 13 samples). Results of the WRS test determined that aluminum is not elevated with respect to background. The box and whisker plot shows that the median concentrations are very similar, and that the 75th percentile concentration for the site is above the background concentration.

A spatial evaluation shows that two elevated concentrations of aluminum greater than or equal to 11 mg/L are located approximately 500 feet apart (**Appendix H**) and one of these locations (18SW27) does match the location of an elevated concentration in sediment.

In conclusion, aluminum was not considered a final COPEC for the Harrison Bayou watershed because:

- All wildlife surface water-associated EEQs were estimated to be close to or less than 1.0.
- CBR-based HQs are not expected to be a concern, based on measured fish tissue concentrations of aluminum showing non-detect results in Caddo Lake.
- Geochemical results indicated the concentrations are consistent with background.
- Results of the WRS test showed that aluminum was not elevated with respect to background.

Aluminum is retained on the background list for consideration by risk managers in Step 7.

10.3.1.4 Saunders Branch

Aluminum was not selected as a preliminary COPEC in surface water (**Table 6-28**). Therefore, aluminum is not a final COPEC for the Saunders Branch watershed.

10.3.2 Cadmium

This section summarizes all of the lines of evidence for cadmium in surface water presented in the Step 3 evaluation, and provides a recommendation as to whether the chemical should be carried forward to the BERA as a final COPEC. It should be noted that cadmium is not known to be related to any processes at the installation (**Section 1.3.10**).

10.3.2.1 Goose Prairie Creek

Cadmium was not selected as a preliminary COPEC in surface water (**Table 6-28**). Therefore, cadmium is not a final COPEC for the Goose Prairie Creek watershed.

10.3.2.2 Central Creek

Cadmium was not selected as a final COPEC based on findings presented below; however, it is retained on the background list for consideration by risk managers in Step 7.

The maximum cadmium EEQ for aquatic receptors for this watershed was less than 1.0.

For direct contact, cadmium concentrations were a concern, as a majority of the direct contact surface water toxicity levels were exceeded, including promulgated criteria (**Table 7-11**). For the CBR assessment, cadmium concentrations were also a concern, as the Tier 1 CBR NOAEL-based HQ was above 1 (16) and Tier 2 CBR NOAEL-based HQ was also above 1 (10) (**Table 7-15**). As discussed in **Appendix C**, there is considerable uncertainty associated with the CBR approach. As shown in **Section 8.15**, measured cadmium concentrations in sunfish collected from the Goose Prairie Creek portion of Caddo Lake were non-detect, however, cadmium was not detected in Goose Prairie Creek surface water.

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that that cadmium concentrations measured in this watershed were consistent with background, however, one non-TAL sample (12SW03) should be considered a potential concern because the concentration exceeded the background screening value. UTL and UPL comparisons, the WRS test, and a box and whisker plot were not performed, due to the limited number of detected concentrations.

Cadmium was detected in 2 out of 37 surface water samples collected, resulting in a frequency of detection of 5 percent. A spatial evaluation shows that these two samples, with concentrations greater than or equal to 0.0007 mg/L, are over 5,000 feet apart (**Appendix H**), and do not match locations where elevated concentrations of cadmium were found in sediment.

In conclusion, cadmium was not considered a final COPEC for the Central Creek watershed because:

- All wildlife EEQs were less than 1.
- Geochemical results indicated the concentrations are consistent with background, although one sample could not be evaluated and had a concentration that exceeded the background screening value.
- Cadmium was only detected in two surface water samples, and was not detected in the data gap samples collected in September of 2004 (**Appendix G**).
- Results of a spatial evaluation shows that detected samples were located over 5,000 feet apart.

Cadmium is retained on the background list for consideration by risk managers in Step 7.

10.3.2.3 Harrison Bayou

Cadmium was not selected as a preliminary COPEC in surface water (**Table 6-28**). Therefore, cadmium is not a final COPEC for the Harrison Bayou watershed.

10.3.2.4 Saunders Branch

Cadmium was not selected as a preliminary COPEC in surface water (**Table 6-28**). Therefore, cadmium is not a final COPEC for the Saunders Branch watershed.

10.3.3 Chromium

This section summarizes all of the lines of evidence for chromium in surface water presented in the Step 3 evaluation, and provides a recommendation as to whether the chemical should be carried forward to the BERA as a final COPEC. It should be noted that chromium is known to be process related (**Section 1.3.10**).

10.3.3.1 Goose Prairie Creek

Chromium was not selected as a preliminary COPEC in surface water (**Table 6-28**). Therefore, chromium is not a final COPEC for the Goose Prairie Creek watershed.

10.3.3.2 Central Creek

Chromium was not selected as a preliminary COPEC in surface water (**Table 6-28**). Therefore, chromium is not a final COPEC for the Central Creek watershed.

10.3.3.3 Harrison Bayou

Chromium was not selected as a final COPEC based on findings presented below.

The maximum chromium EEQ for aquatic receptors for this watershed was 1.6 for the Belted Kingfisher based on the NOAEL Tier 1 approach. Other aquatic receptors had EEQs that were less than 1.0. The maximum Raccoon and Raccoon (Louisiana Black Bear) EEQs were also less than 1.0. For the Belted Kingfisher 100 percent of the EEQ was associated with surface water (fish ingestion). However, as discussed in **Section 8.15**, chromium concentrations measured in fish tissue were nondetect (and chromium was detected in surface water of Goose Prairie Creek).

For the direct contact assessment chromium concentrations were not a concern, as a majority of the available direct-contact surface water screening values were not exceeded and no promulgated criteria were exceeded (**Table 7-7**). For the CBR assessments, only the Tier 1 NOAEL-based HQ of 1.1 was slightly above 1 (**Table 7-15**). As shown in **Section 8.15**, chromium concentrations in sunfish collected from the Goose Prairie Creek portion of Caddo Lake were non-detect (and chromium was detected in surface water of Goose Prairie Creek), suggesting that modeled fish tissue concentrations (and the elevated CBR HQs) are not representative of actual conditions.

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that chromium concentrations measured in this watershed were consistent with background, however, one non-TAL sample (18SW14) should be considered a potential concern because the concentration exceeded the background screening value.

Results of the UTL and UPL comparisons showed that chromium was elevated with respect to background. Given the number of chromium surface water samples collected at this watershed compared with the background data set (39 vs. 13 samples), these findings are not unexpected. As the site data set is larger than the background data set, the identification, by chance alone, of detecting higher concentrations in the site samples than in background samples, is quite likely. The WRS text was not run as more than 50 percent of the samples in at least one data set were nondetect. The box and whisker plot was not prepared for this watershed.

A spatial evaluation shows that two elevated concentrations of chromium, greater than or equal to 0.013 mg/L are approximately 2,000 feet apart (**Appendix H**), but it is unlikely that sediment is a source of these levels in surface water because chromium was not selected as a COPEC in sediment (**Section 10.2.4**).

In conclusion, chromium was not considered a final COPEC for the Harrison Bayou watershed because:

- The NOAEL-based EEQ for the Belted Kingfisher was very close to 1 (1.6). In addition, this EEQ was based on a modeled chromium concentration in fish tissue, however, all measured fish tissue samples were nondetect.
- Other aquatic receptors had EEQs that were less than 1.

- Geochemical results indicated the concentrations are consistent with background, although one sample could not be evaluated and had a concentration that exceeded the background screening value.
- CBR-based HQs are not expected to be a concern, based on measured fish tissue concentrations of chromium showing non-detect results in Caddo Lake.
- Results of a spatial evaluation shows that detected samples were located over 2,000 feet apart.

10.3.3.4 Saunders Branch

Chromium was not selected as a preliminary COPEC in surface water (**Table 6-28**). Therefore, chromium is not a final COPEC for the Saunders Branch watershed.

10.3.4 Copper

This section summarizes all of the lines of evidence for copper in surface water presented in the Step 3 evaluation, and provides a recommendation as to whether the chemical should be carried forward to the BERA as a final COPEC. It should be noted that copper is not known to be related to any processes at the installation (**Section 1.3.10**).

10.3.4.1 Goose Prairie Creek

Copper was not selected as a final COPEC based on findings presented below; however, it is retained on the background list for consideration by risk managers in Step 7.

The maximum copper EEQ for aquatic receptors for this watershed was less than 1.0.

For direct contact, copper concentrations were a concern, as a majority of the direct contact surface water toxicity levels were exceeded, including promulgated criteria (**Table 7-9**). For the CBR assessment, cadmium concentrations were also a concern, as the Tier 1 CBR NOAEL-based HQ was above 1 (4.3). The Tier 2 CBR NOAEL-based HQ, however, was below 1 (0.7) (**Table 7-15**). As discussed in **Appendix C**, there is considerable uncertainty associated with the CBR approach. As shown in **Section 8.15**, measured copper concentrations in sunfish collected from the Goose Prairie Creek portion of Caddo Lake were non-detect (and copper was detected in surface water of Goose Prairie Creek), suggesting that modeled fish tissue concentrations (and the elevated CBR HQs) are not representative of actual conditions.

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that one copper sample (50SW07) was a geochemical outlier, and two non-TAL samples (32SW08 and 32SW09) should be considered a potential concern because the concentrations exceeded the background screening value.

Results of the UPL and UTL comparisons showed that copper was potentially elevated with respect to background; however, given the number of copper surface water samples collected at this watershed compared with the background data set (41 vs. 13 samples), these findings are not unexpected. As the site data set is much larger than the background data set, the identification, by chance alone, of detecting higher concentrations in the site samples than in background samples, is quite likely. The WRS test and the box and whisker plot were not performed due to the limited number of copper detections in site samples.

Copper was detected in 4 out of 41 surface water samples collected, resulting in a frequency of detection of 10 percent.

A spatial evaluation shows that two samples with elevated concentrations of copper, greater than or equal to 0.012 mg/L, are as close together as 150 feet (**Appendix H**), but do not match locations where elevated concentrations of copper in sediment were found.

Copper was nondetect in the surface water samples collected in September 2004 as part of the data gap investigation (**Appendix G**).

In conclusion, copper was not considered a final COPEC for the Goose Prairie Creek watershed because:

- All aquatic receptors had EEQs that were less than 1.
- Geochemical results indicated the concentrations are consistent with background, although two samples could not be evaluated and had concentrations that exceeded the background screening value and one result was inconsistent with background.
- Copper was not detected in the surface water samples collected in September 2004 as part of the data gap investigation.
- CBR-based HQs are not expected to be a concern, based on measured fish tissue concentrations of copper showing non-detect results in Caddo Lake.

Copper is retained on the background list for consideration by risk managers in Step 7.

10.3.4.2 Central Creek

Copper was not selected as a final COPEC based on findings presented below; however, it is retained on the background list for consideration by risk managers in Step 7.

The maximum copper EEQ for aquatic receptors for this watershed was less than 1.0.

For direct contact, copper concentrations were a concern, as a majority of the direct contact surface water toxicity levels were exceeded, however, promulgated criteria were not exceeded

(**Table 7-11**). For the CBR assessment, cadmium concentrations were a concern, as the Tier 1 CBR NOAEL-based HQ was above 1 (3.6). The Tier 2 CBR NOAEL-based HQ was below 1 (0.53) (**Table 7-15**). As discussed in **Appendix C**, there is considerable uncertainty associated with the CBR approach. As shown in **Section 8.15**, measured copper concentrations in sunfish collected from the Goose Prairie Creek portion of Caddo Lake were non-detect (and copper was detected in surface water of Goose Prairie Creek), suggesting that modeled fish tissue concentrations (and the elevated CBR HQs) are not representative of actual conditions.

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that one copper sample (12SW19) was a geochemical outlier. In addition, four non-TAL samples should be considered a potential concern because the concentrations exceeded the background screening value.

Results of the UPL and UTL comparisons showed that copper was elevated with respect to background; however, given the number of copper surface water samples collected at this watershed compared with the background data set (20 vs. 13 samples), these findings are not unexpected. As the site data set is larger than the background data set, the identification by chance alone of naturally-occurring elevated inorganic concentrations is quite likely. The WRS test and the box and whisker plot were not performed due to the limited number of copper detections in site samples.

A spatial evaluation shows that four samples with elevated concentrations of copper, greater than or equal to 0.09 mg/L, are at least 1,500 feet apart (**Appendix H**), and are not likely related to concentrations in sediment, as copper detected in sediment samples was generally determined to be background related (**Section 10.2.5.2**).

Copper was nondetect in the surface water samples collected in September 2004 as part of the data gap investigation (**Appendix G**).

In conclusion, copper was not considered a final COPEC for the Central Creek watershed because:

- All aquatic receptors had EEQs that were less than 1.
- Geochemical results indicated the concentrations are consistent with background, although four samples could not be evaluated and had concentrations that exceeded the background screening value and one result was inconsistent with background.
- Copper was not detected in the surface water samples collected in September 2004 as part of the data gap investigation.
- CBR-based HQs are not expected to be a concern, based on measured fish tissue concentrations of copper showing non-detect results in Caddo Lake.

Copper is retained on the background list for consideration by risk managers in Step 7.

10.3.4.3 Harrison Bayou

Copper was not selected as a final COPEC based on findings presented below; however, it is retained on the background list for consideration by risk managers in Step 7.

The maximum copper EEQ for aquatic receptors for this watershed was less than 1.0.

For direct contact, copper concentrations were a concern, as a majority of the direct contact surface water toxicity levels were exceeded, including promulgated criteria (**Table 7-7**). For the CBR assessment, copper concentrations were also a concern, as Tier 1 CBR NOAEL-based HQ was above 1 (5.1). The Tier 2 CBR NOAEL-based HQ, however, was below 1 (0.7) (**Table 7-15**). As discussed in **Appendix C**, there is considerable uncertainty associated with the CBR approach. As shown in **Section 8.15**, measured copper concentrations in sunfish collected from the Goose Prairie Creek portion of Caddo Lake were non-detect (and copper was detected in surface water of Goose Prairie Creek), suggesting that modeled fish tissue concentrations (and the elevated CBR HQs) are not representative of actual conditions.

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that copper concentrations measured in this watershed were consistent with background, however, seven non-TAL samples should be considered a potential concern because the concentration exceeded the background screening value.

Results of the UPL and UTL comparisons showed that copper was elevated with respect to background, however, given the number of copper surface water samples collected at this watershed compared with the background data set (27 vs. 13 samples), these findings are not unexpected. As the site data set is larger than the background data set, the identification, by chance alone, of detecting higher concentrations in the site samples than in background samples, is quite likely. The WRS test and the box and whisker plot were not performed due to the limited number of copper detections in either the site or background data sets.

A spatial evaluation shows that three samples with elevated concentrations of copper, greater than or equal to 0.008 mg/L, are greater than 1,500 feet apart (**Appendix H**), and are not likely related to concentrations in sediment, as copper detected in sediment samples was determined to be background related (**Section 10.2.5.3**).

Copper was nondetect in the surface water samples collected in September 2004 as part of the data gap investigation (**Appendix G**).

In conclusion, copper was not considered a final COPEC for the Harrison Bayou watershed because:

- All aquatic receptors had EEQs that were less than 1.
- Geochemical results indicated the concentrations are consistent with background, although seven samples could not be evaluated and had concentrations that exceeded the background screening value.
- Copper was not detected in the surface water samples collected in September 2004 as part of the data gap investigation.
- CBR-based HQs are not expected to be a concern, based on measured fish tissue concentrations of copper showing non-detect results in Caddo Lake.

Copper is retained on the background list for consideration by risk managers in Step 7.

10.3.4.4 Saunders Branch

Copper was not selected as a preliminary COPEC in surface water (**Table 6-28**). Therefore, copper is not a final COPEC for the Saunders Branch watershed.

10.3.5 Iron

This section summarizes all of the lines of evidence for iron in surface water presented in the Step 3 evaluation, and provides a recommendation as to whether the chemical should be carried forward to the BERA as a final COPEC. It should be noted that iron is associated with general operations of the installation (**Section 1.3.10**).

10.3.5.1 Goose Prairie Creek

Iron was not selected as a final COPEC based on findings presented below; however, it is retained on the background list for consideration by risk managers in Step 7.

EEQs for aquatic receptors for this watershed could not be calculated, as no iron TRVs are readily available for either mammal or avian receptors.

For direct contact, iron concentrations were a concern, as all of the direct contact surface water toxicity levels were exceeded, including the promulgated criterion (**Table 7-9**). For the CBR assessment, no conclusions could be drawn due to the lack of CBR values for iron. As shown in **Section 8.15**, measured iron concentrations in sunfish collected from the Goose Prairie Creek portion of Caddo Lake were approximately 9-fold lower than modeled concentrations, suggesting that modeled fish tissue concentrations are not representative of actual conditions.

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that iron concentrations measured in this watershed were consistent with background.

Results of the UTL comparison and WRS test showed that iron was not elevated with respect to background; however, results of the UPL comparison showed that this inorganic was potentially elevated with respect to background. Given the number of iron surface water samples collected at this watershed compared with the background data set (35 vs. 13 samples), this UPL finding is not unexpected. As the site data set is much larger than the background data set, the identification, by chance alone, of detecting higher concentrations in the site samples than in background samples, is quite likely. The box and whisker plot for iron shows that the 75th percentile concentrations are similar between the site and background data sets, and that the median site concentration is higher than the background concentration.

A spatial evaluation shows that one elevated concentration of iron (50SW03; 12 mg/L) is located in the upper portion of the watershed (**Appendix H**) and is not likely related to concentrations in sediment, as iron was not selected as a COPEC in sediment.

In conclusion, iron was not considered a final COPEC for the Goose Prairie Creek watershed because:

- Geochemical results indicated the concentrations are consistent with background.
- Results of the UTL comparisons and the WRS test showed that iron was not elevated with respect to background.

Iron is retained on the background list for consideration by risk managers in Step 7.

10.3.5.2 Central Creek

Iron was not selected as a final COPEC based on findings presented below; however, it is retained on the background list for consideration by risk managers in Step 7.

EEQs for aquatic receptors for this watershed could not be calculated, as no iron TRVs are readily available for either mammal or avian receptors.

For direct contact, iron concentrations were a concern, as all of the direct contact surface water toxicity levels were exceeded, including the promulgated criterion (**Table 7-11**). For the CBR assessment, no conclusions could be drawn due to the lack of CBR values for iron. As shown in **Section 8.15**, measured iron concentrations in sunfish collected from the Goose Prairie Creek portion of Caddo Lake were approximately 9-fold lower than modeled concentrations (and iron was detected in surface water of Goose Prairie Creek), suggesting that modeled fish tissue concentrations are not representative of actual conditions.

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that iron concentrations measured in this watershed were consistent with background.

Results of the UTL comparison and WRS test showed that iron was not elevated with respect to background; however, results of the UPL comparison showed that this inorganic was potentially elevated with respect to background. The number of iron surface water samples collected at this watershed was less than that collected for the background data set (9 vs. 13 samples). The box and whisker plot for iron shows that both the median and 75th percentile concentrations are slightly above the background concentrations for these two statistics.

A spatial evaluation shows that one elevated concentration of iron (29SW23; 15.85 mg/L) is located in the upper portion of the watershed (**Appendix H**) and is not likely related to concentrations in sediment, as iron was not selected as a COPEC in sediment.

In conclusion, iron was not considered a final COPEC for the Central Creek watershed because:

- Geochemical results indicated the concentrations are consistent with background.
- Results of the UTL comparisons and the WRS test showed that iron was not elevated with respect to background.

Iron is retained on the background list for consideration by risk managers in Step 7.

10.3.5.3 Harrison Bayou

Iron was not selected as a final COPEC based on findings presented below; however, it is retained on the background list for consideration by risk managers in Step 7.

EEQs for aquatic receptors for this watershed could not be calculated, as no iron TRVs are readily available for either mammal or avian receptors.

For direct contact, iron concentrations were a concern, as all of the direct contact surface water toxicity levels were exceeded, including the promulgated criterion (**Table 7-7**). For the CBR assessment, no conclusions could be drawn due to the lack of CBR values for iron. As shown in **Section 8.15**, measured iron concentrations in sunfish collected from the Goose Prairie Creek portion of Caddo Lake were approximately 9-fold lower than modeled concentrations (and iron was detected in surface water of Goose Prairie Creek), suggesting that modeled fish tissue concentrations are not representative of actual conditions.

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that iron concentrations measured in this watershed were consistent with background.

Results of the UPL and UTL comparisons showed that iron was potentially elevated with respect to background; however, results of the WRS test showed that iron was not elevated with respect to background. The number of iron surface water samples collected at this watershed was less than that collected for the background data set (7 vs. 13 samples). The box and whisker plot for iron shows that the median concentrations are similar between the site and background data sets, and that the 75th percentile site concentration is higher than the background concentration.

A spatial evaluation shows that two elevated concentrations of iron, greater than or equal to 11 mg/L, are located in the upper portion of the watershed approximately 650 apart (**Appendix H**) and are not likely related to concentrations in sediment, as iron was not selected as a COPEC in sediment.

In conclusion, iron was not considered a final COPEC for the Harrison Bayou watershed because:

- Geochemical results indicated the concentrations are consistent with background.
- Results of the WRS test showed that iron was not elevated with respect to background.

Iron is retained on the background list for consideration by risk managers in Step 7.

10.3.5.4 Saunders Branch

Iron was not selected as a preliminary COPEC in surface water (**Table 6-28**). Therefore, iron is not a final COPEC for the Saunders Branch watershed.

10.3.6 Lead

This section summarizes all of the lines of evidence for lead in surface water presented in the Step 3 evaluation, and provides a recommendation as to whether the chemical should be carried forward to the BERA as a final COPEC. It should be noted that lead is known to be process related (**Section 1.3.10**).

10.3.6.1 Goose Prairie Creek

Lead was not selected as a final COPEC based on findings presented below; however, it is retained on the background list for consideration by risk managers in Step 7.

The maximum lead EEQ for aquatic receptors for this watershed was 2.0 for the Bank Swallow, based on the NOAEL Tier 1 approach. Other aquatic receptors (Belted Kingfisher, River Otter, and Muskrat) had EEQs that were less than 1.0. The maximum Raccoon and Raccoon (Louisiana Black Bear) EEQs were also less than 1.0. For the Bank Swallow much less than

1 percent of the EEQ was associated with surface water, therefore, the surface water-associated EEQ was less than 1.

For the direct contact assessment, a majority of the surface water criteria were not exceeded, but lead concentrations were a concern as promulgated criteria were exceeded (**Table 7-9**). For the CBR assessment lead concentrations were not a concern, as the Tier 1 CBR HQ was below 1 (**Table 7-15**).

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that one lead sample (32SW19) was a geochemical outlier and four non-TAL samples should be considered a potential concern because the concentrations exceeded the background screening level.

Results of the UTL and UPL comparisons showed that lead was potentially elevated with respect to background. Given the number of lead surface water samples collected at this watershed compared with the background data set (50 vs. 13 samples), the UTL and UPL findings are not unexpected. As the site data set is much larger than the background data set, the identification, by chance alone, of detecting higher concentrations in the site samples than in background samples, is quite likely. Results of the WRS test showed that lead was not elevated with respect to background. The box and whisker plot for lead shows that both the median and 75th percentile concentrations are below the background concentrations for these two statistics.

The results of the background comparison were initially interpreted to indicate that lead in surface water at Goose Prairie Creek is associated with background. However, state and federal regulatory agencies disagreed with this interpretation. To address the question as to whether lead was background-related, a separate surface water study was conducted at LHAAP. In July 2007, eight samples were collected from Goose Prairie Creek and eight were collected from previously established background locations. A new background evaluation was performed on these data. The full analysis is presented in **Appendix F-1.** The results of this analysis indicate lead in surface water is background related.

A spatial evaluation shows that four samples with elevated concentrations of lead, greater than 0.011 mg/L, are as close together as 250 feet (**Appendix H**), and three of the four match locations where elevated concentrations of lead in sediment were found.

In conclusion, lead was not considered a final COPEC for the Goose Prairie Creek watershed because:

- All aquatic receptors had surface water associated EEQs that were less than 1.0.
- There was not an overall concern for CBR exposure.

- Results of a new background evaluation (**Appendix F-1**) showed that lead was not elevated with respect to background.

Lead is retained on the background list for consideration by risk managers in Step 7.

10.3.6.2 Central Creek

Lead was not selected as a final COPEC based on findings presented below; however, it is retained on the background list for consideration by risk managers in Step 7.

The maximum lead EEQ for aquatic receptors for this watershed was less than 1.0.

For the direct contact assessment, a majority of surface water criteria were not exceeded, but lead concentrations were a concern, as promulgated criteria were exceeded (**Table 7-11**). For the CBR assessment lead concentrations were not a concern, as the Tier 1 CBR HQ was below 1 (**Table 7-15**).

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that lead concentrations measured in this watershed were consistent with background, however, four non-TAL samples should be considered a potential concern because concentrations exceeded the background screening concentration.

Results of the UTL and UPL comparisons showed that lead was potentially elevated with respect to background. Given the number of lead surface water samples collected at this watershed compared with the background data set (37 vs. 13 samples), these findings are not unexpected. As the site data set is larger than the background data set, the identification, by chance alone, of detecting higher concentrations in the site samples than in background samples, is quite likely. The WRS text was not run as more than 50 percent of the samples in at least one data set were nondetect. The box and whisker plot was not prepared for this site.

A spatial evaluation shows that two samples with elevated concentrations of lead, greater than or equal to 0.0106 mg/L, are almost 1,000 feet apart (**Appendix H**), and are unlikely related to elevated concentrations of lead in sediment because lead was not selected as a COPEC in sediment (**Section 10.2.6.2**).

In conclusion, lead was not considered a final COPEC for the Central Creek watershed because:

- All aquatic receptors had EEQs that were less than 1.0.
- There was not an overall concern for CBR exposure.
- Elevated detections of lead in surface water are not indicative of a source area.

- Geochemical results indicated the concentrations are consistent with background, although four samples could not be evaluated and had concentrations that exceeded the background screening value.

Lead is retained on the background list for consideration by risk managers in Step 7.

10.3.6.3 Harrison Bayou

Lead was not selected as a final COPEC based on findings presented below; however, it is retained on the background list for consideration by risk managers in Step 7.

The maximum lead EEQ for aquatic receptors for this watershed was less than 1.0.

For the direct contact assessment, a majority of the surface water criteria were not exceeded, but lead concentrations were a concern as promulgated criteria were exceeded (**Table 7-7**). For the CBR assessment lead concentrations were not a concern, as the Tier 1 CBR HQ was below 1 (**Table 7-15**).

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that lead concentrations measured in this watershed were consistent with background, however, three non-TAL samples should be considered a potential concern because concentrations exceeded the background screening concentration. However, these three non-TAL samples are quite old (they were collected in 1993 and 1995) and are not expected to be representative of current conditions.

Results of the UTL and UPL comparisons showed that lead was potentially elevated with respect to background. Given the number of lead surface water samples collected at this watershed compared with the background data set (39 vs. 13 samples), these findings are not unexpected. As the site data set is larger than the background data set, the identification, by chance alone, of detecting higher concentrations in the site samples than in background samples, is quite likely. The WRS text was not run as more than 50 percent of the samples in at least one data set were nondetect. The box and whisker plot was not prepared for this site.

In conclusion, lead was not considered a final COPEC for the Harrison Bayou watershed because:

- All aquatic receptors had EEQs that were less than 1.0.
- Geochemical results indicated the concentrations are consistent with background, although three samples could not be evaluated and had concentrations that exceeded the background screening value.
- There was not an overall concern for CBR exposure.

Lead is retained on the background list for consideration by risk managers in Step 7.

10.3.6.4 Saunders Branch

Lead was not selected as a final COPEC based on findings presented below; however, it is retained on the background list for consideration by risk managers in Step 7.

The maximum lead EEQ for aquatic receptors for this watershed was less than 1.0.

For the direct contact assessment, a majority of the surface water criteria were not exceeded, but lead concentrations were a concern, as promulgated criteria were exceeded (**Table 7-13**). For the CBR assessment lead concentrations were not a concern, as the Tier 1 CBR HQ was below 1 (**Table 7-15**).

Background evaluations (**Appendix F**) using a geochemical analysis could not be performed as none of the samples were analyzed for the required reference elements.

Results of the UTL and UPL comparisons showed that lead was not elevated with respect to background. The number of lead surface water samples collected at this watershed was less than that collected for the background data set (8 vs. 13 samples). The WRS text was not run as more than 50 percent of the samples in at least one data set were nondetect. The box and whisker plot was not prepared for this site.

In conclusion, lead was not considered a final COPEC for the Saunders Branch watershed because:

- All aquatic receptors had EEQs that were less than 1.0.
- There was not an overall concern for CBR exposure.
- Results of the UTL and UPL comparisons showed that lead was not elevated with respect to background.

Lead is retained on the background list for consideration by risk managers in Step 7.

10.3.7 Manganese

This section summarizes all of the lines of evidence for manganese in surface water presented in the Step 3 evaluation, and provides a recommendation as to whether the chemical should be carried forward to the BERA as a final COPEC. It should be noted that manganese is known to be process related (**Section 1.3.10**).

10.3.7.1 Goose Prairie Creek

Manganese was not selected as a final COPEC based on findings presented below.

The maximum manganese EEQ for aquatic receptors for this watershed was less than 1. The maximum Raccoon and Raccoon (Louisiana Black Bear) EEQs were also less than 1.0.

For the direct contact assessment, manganese concentrations were not a concern as a majority of the available benchmarks were not exceeded, and no promulgated criteria were exceeded (**Table 7-9**). For the CBR assessment, no CBR values were available for manganese (**Table 7-15**). As shown in **Section 8.15**, manganese concentrations in sunfish collected from the Goose Prairie Creek portion of Caddo Lake were nondetect (and manganese was detected in surface water of Goose Prairie Creek), suggesting that modeled fish tissue concentrations are not representative of actual conditions.

Geochemical analyses were not run for manganese in this watershed.

Results of the UPL comparison showed that manganese was potentially elevated with respect to background, however, results of the UTL comparison showed that this inorganic chemical was not elevated with respect to background. Given the number of manganese surface water samples collected at this watershed compared with the background data set (50 vs. 13 samples), the UPL findings are not unexpected. As the site data set is much larger than the background data set, the identification, by chance alone, of detecting higher concentrations in the site samples than in background samples, is quite likely. Results of the WRS test showed that manganese was not elevated with respect to background.

In conclusion, manganese was not considered a final COPEC for the Goose Prairie Creek watershed because:

- All aquatic receptors had EEQs that were less than 1.0.
- There were no direct contact concerns.
- There was not an overall concern for CBR exposure.
- Results of the WRS test and UTL analysis showed that manganese was not elevated with respect to background.

10.3.7.2 Central Creek

Manganese was not selected as a final COPEC based on findings presented below.

The maximum manganese EEQ for aquatic receptors for this watershed was less than 1. The maximum Raccoon and Raccoon (Louisiana Black Bear) EEQs were also less than 1.0.

For the direct contact assessment, manganese concentrations were not a concern as a majority of the available benchmarks were not exceeded, and no promulgated criteria were exceeded (**Table 7-11**). For the CBR assessment, no CBR values were available for manganese

(**Table 7-15**). As shown in **Section 8.15**, manganese concentrations in sunfish collected from the Goose Prairie Creek portion of Caddo Lake were nondetect, suggesting that modeled fish tissue concentrations are not representative of actual conditions.

Geochemical analyses were not run for manganese in this watershed.

Results of the UPL comparison showed that manganese was potentially elevated with respect to background, however, results of the UTL comparison showed that this inorganic chemical was not elevated with respect to background. Given the number of manganese surface water samples collected at this watershed compared with the background data set (37 vs. 13 samples), the UPL findings are not unexpected. As the site data set is much larger than the background data set, the identification, by chance alone, of detecting higher concentrations in the site samples than in background samples, is quite likely. Results of the WRS test showed that manganese was not elevated with respect to background.

In conclusion, manganese was not considered a final COPEC for the Central Creek watershed because:

- All aquatic receptors had EEQs that were less than 1.0.
- There were no direct contact concerns.
- There was not an overall concern for CBR exposure.
- Results of the WRS test and UTL analysis showed that manganese was not elevated with respect to background.

10.3.7.3 Harrison Bayou

Manganese was not selected as a final COPEC based on findings presented below.

The maximum manganese EEQ for aquatic receptors for this watershed was less than 1. The maximum Raccoon and Raccoon (Louisiana Black Bear) EEQs were also less than 1.0.

For the direct contact assessment, manganese concentrations were not a concern as a majority of the available benchmarks were not exceeded, and no promulgated criteria were exceeded (**Table 7-7**). For the CBR assessment, no CBR values were available for manganese (**Table 7-15**). As shown in **Section 8.15**, manganese concentrations in sunfish collected from the Goose Prairie Creek portion of Caddo Lake were nondetect, suggesting that modeled fish tissue concentrations are not representative of actual conditions.

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that manganese concentrations measured in this watershed were consistent with background.

Results of the UPL and UTL comparisons showed that manganese was potentially elevated with respect to background. Given the number of manganese surface water samples collected at this watershed compared with the background data set (7 vs. 13 samples), the UPL and UTL findings are reasonable. Results of the WRS test showed that manganese was elevated with respect to background. Recently collected (2007) background samples collected upstream on Harrison Bayou on July 22, 2007 (**Appendix F-1**) show unfiltered manganese concentrations as elevated as 5.44 mg/L (BKGSW08). As the maximum detected manganese concentration on site within the Harrison Bayou watershed was only 1.77 mg/L (**Table 6-20**), manganese concentrations appear to be background related,

In conclusion, manganese was not considered a final COPEC for the Harrison Bayou watershed because:

- All aquatic receptors had EEQs that were less than 1.0.
- Results of 2007 background data, and geochemical analysis results, suggest manganese was not elevated with respect to background.
- There was not an overall concern for CBR exposure.

10.3.7.4 Saunders Branch

Manganese was not selected as a preliminary COPEC in surface water (**Table 6-28**). Therefore, manganese is not a final COPEC for the Saunders Branch watershed.

10.3.8 Nitrate/Nitrite

This section summarizes all of the lines of evidence for nitrate/nitrite in surface water presented in the Step 3 evaluation, and provides a recommendation as to whether the chemical should be carried forward to the BERA as a final COPEC. It should be noted that nitrate/nitrite may be a breakdown product of constituents known to be process related, such as TNT (**Section 1.3.10**).

10.3.8.1 Goose Prairie Creek

Nitrate/nitrite was not selected as a final COPEC based on findings presented below.

The maximum nitrate/nitrite EEQ for aquatic receptors for this watershed was less than 1.0. For the direct contact and CBR assessments nitrate/nitrite concentrations were not a concern; however, no surface water or CBR screening levels were available.

In conclusion, nitrate/nitrite is not selected as a final COPEC for the Goose Prairie Creek watershed.

10.3.8.2 Central Creek

Nitrate/nitrite was not selected as a final COPEC based on findings presented below.

The maximum nitrate/nitrite EEQ for aquatic receptors for this watershed was less than 1.0. For the direct contact and CBR assessments, nitrate/nitrite concentrations were not a concern, however, no surface water or CBR screening levels were available.

In conclusion, nitrate/nitrite is not selected as a final COPEC for the Central Creek watershed.

10.3.8.3 Harrison Bayou

Nitrate/nitrite was not selected as a final COPEC based on findings presented below.

The maximum nitrate/nitrite EEQ for aquatic receptors for this watershed was 3.4 for the River Otter, based on the NOAEL Tier 1 approach. The other mammalian aquatic receptor (the Muskrat) had an EEQ of less than 1.0. The Belted Kingfisher and Bank Swallow did not have EEQs estimated as TRVs were not readily available for avian receptors. The maximum Raccoon and Raccoon (Louisiana Black Bear) EEQs were also less than 1.0. For the River Otter, 100 percent of the estimated EEQ was associated with surface water through the ingestion of fish.

For the direct contact and CBR assessments nitrate/nitrite concentrations were not a concern, however, no surface water or CBR screening levels were available.

Results of the UTL and UPL comparisons showed that nitrate was potentially elevated with respect to background. The number of nitrate surface water samples collected from this watershed was similar to that collected from the background data set (15 vs. 13 samples). Results of the WRS test showed that nitrate was not elevated with respect to background. It should be noted that the WRS test was not run for nitrate/nitrite. The box and whisker plot for nitrate shows that both the median and 75th percentile concentrations are slightly above the background concentrations for these two statistics.

Surface water-to-fish BCFs used for modeling nitrate/nitrite were 1,068 for the Tier 1 assessment and 301 for the Tier 2 assessment. These were based on the geometric mean of the Tier 1 and Tier 2 BCFs available for other inorganic chemicals (**Table 7-24**). This approach is likely to be conservative and probably overestimates bioaccumulation for this constituent to a considerable degree, as reflected by the fact that measured fish tissue samples collected from Caddo Lake were generally nondetect for metals.

In conclusion, nitrate/nitrite was not considered a final COPEC for the Harrison Bayou watershed because:

- It is very likely that River Otter hazards were overestimated by using a surrogate surface water-to-fish BCF. Measured fish tissue samples collected from Caddo Lake were generally nondetect for metals.
- All other aquatic receptors had EEQs that were less than 1.0.
- There is no evidence that direct contact or CBR concentrations are a concern.
- Results of the WRS test for nitrate showed that this COPEC was not elevated with respect to background.

10.3.8.4 Saunders Branch

Nitrate/nitrite was not selected as a preliminary COPEC in surface water (**Table 6-28**). Therefore, nitrate/nitrite is not a final COPEC for the Saunders Branch watershed.

10.3.9 Thallium

This section summarizes all of the lines of evidence for thallium in surface water presented in the Step 3 evaluation, and provides a recommendation as to whether the chemical should be carried forward to the BERA as a final COPEC. It should be noted that thallium is not known to be related to any processes at the installation (**Section 1.3.10**).

10.3.9.1 Goose Prairie Creek

Thallium was not selected as a final COPEC based on findings presented below.

The maximum thallium EEQ for aquatic receptors for this watershed was 53 for the River Otter, based on the NOAEL Tier 1 approach. This maximum EEQ reduced to less than 1 for the NOAEL Tier 2 approach. Other aquatic receptors had the following EEQs: Muskrat (0.7); Bank Swallow (0.4); and Belted Kingfisher (9.6). The maximum Raccoon EEQ was 12.6 and the maximum Raccoon (Louisiana Black Bear) EEQ was 7.4. For the River Otter 99 percent of the EEQ was associated with surface water (from fish ingestion), for the Raccoon 73 percent of the EEQ was associated with surface water (from fish ingestion), for the Raccoon (Louisiana Black Bear 74 percent of the EEQ was associated with surface water (from fish ingestion) and for the Belted Kingfisher 98 percent of the EEQ was associated with surface water (from fish ingestion). For these receptors, the surface water-associated EEQs were as follows: River Otter (53 x 0.99 = 52); Raccoon (12.6 x 0.73 = 9.2); Raccoon (Louisiana Black Bear (7.4 x 0.74 = 5.5); and Belted Kingfisher (9.6 x 0.98 = 9.4).

For the CBR evaluation, the NOAEL-based Tier 1 HQ for the fathead minnow was above 1 (1.4), however the NOAEL-based Tier 2 HQ was less than 1, suggesting limited adverse ecological impacts to aquatic receptors (**Table 7-15**).

For the direct contact assessment none of the available direct contact screening values was exceeded, suggesting no adverse impacts to aquatic receptors (**Table 7-9**).

Results of the background evaluation (**Appendix F**) demonstrated that there was limited evidence of thallium contamination in the watershed surface water samples. UTL and UPL comparisons and the WRS test were not performed because thallium was not detected in the background data set.

The water-to-fish BAF used for the Tier 1 approach was 15,900 from USEPA (1999) as discussed in **Table 7-24**, and for the Tier 2 approach a BCF of 75 from USEPA (1989) was used. This large BCF range (over 200-fold) suggests that there is considerable uncertainty with the Tier 1 BCF, which is responsible for almost all of the estimated aquatic wildlife hazards. In addition, it should be noted that although BCFs were modified to be more representative of total concentrations in surface water (rather than dissolved concentrations) it is very likely that the total concentrations used in the Step 3 report overestimate bioavailability to a considerable degree, and therefore, overestimate fish ingestion exposure when used with the previously discussed BCFs. As shown in **Section 8.15**, measured thallium concentrations in sunfish collected from the Goose Prairie Creek portion of Caddo Lake were all nondetect for thallium (and thallium was detected in surface water of Goose Prairie Creek), strongly suggesting that modeled fish tissue concentrations are not representative of actual conditions.

A spatial evaluation shows that two samples with elevated concentrations of thallium, greater than 0.0017 mg/L (out of a total of fourteen samples), are located more than 500 feet apart and neither of these locations matches the location of an elevated concentration in sediment (**Appendix H**).

In conclusion, thallium was not considered a final COPEC for the Goose Prairie Creek watershed because:

- The geochemical evaluation concluded that there was limited evidence of thallium contamination in the watershed surface water samples.
- Direct contact hazards and CBR HQs are generally acceptable.
- Wildlife surface water-associated EEQs, although above 1, are overestimated due to the unrealistically high thallium surface water-to-fish BCF. Measured fish tissue samples collected from Caddo Lake were nondetect for thallium.

10.3.9.2 Central Creek

Thallium was not selected as a preliminary COPEC in surface water (**Table 6-28**). Therefore, thallium is not a final COPEC for the Central Creek watershed.

10.3.9.3 Harrison Bayou

Thallium was not selected as a final COPEC based on findings presented below.

The maximum thallium EEQ for aquatic receptors for this watershed was 46 for the River Otter, based on the NOAEL Tier 1 approach. Other aquatic receptors had the following EEQs: Muskrat and Bank Swallow (below 1); Belted Kingfisher (4.3). The maximum Raccoon EEQ was 7.0 and the maximum Raccoon (Louisiana Black Bear) EEQ was 4.1. For the River Otter 99 percent of the EEQ was associated with surface water (from fish ingestion), for the Raccoon 58 percent of the EEQ was associated with surface water (from fish ingestion), for the Raccoon (Louisiana Black Bear) 59 percent of the EEQ was associated with surface water (from fish ingestion), and for the Belted Kingfisher 97 percent of the EEQ was associated with surface water (from fish ingestion). For these receptors, the surface water-associated EEQs were as follows: River Otter (46 x 0.99 = 45.5); Raccoon (7.0 x 0.58 = 4.1); Raccoon (Louisiana Black Bear (4.1 x 0.59 = 2.4); and Belted Kingfisher (4.3 x 0.97 = 4.2).

For the direct contact assessment and CBR evaluation, none of the available evaluation criteria suggested adverse ecological impacts to aquatic receptors (**Tables 7-7** and **7-15**).

Results of the background evaluation (**Appendix F**) demonstrated that there is no direct evidence for thallium contamination in site surface waters.

UTL and UPL comparisons and the WRS test were not performed because thallium was not detected in the background data set.

As discussed in **Section 10.3.9.1**, the thallium surface water-to-fish BCF is expected to overestimate fish ingestion exposure for the River Otter by a considerable amount. As shown in **Section 8.15**, measured thallium concentrations in sunfish collected from the Goose Prairie Creek portion of Caddo Lake were all nondetect for thallium (and thallium was detected in surface water of Goose Prairie Creek), strongly suggesting that modeled fish tissue concentrations are not representative of actual conditions.

Thallium was infrequently detected, found in only 1 out 39 samples, or 2.6 percent. In addition, data collected as part of the data gap investigation in September 2004 indicate that thallium concentrations have declined over time (**Appendix G**).

A spatial evaluation shows that the one detected concentration of thallium (out of thirty-nine samples) is close to two locations of elevated thallium concentrations in sediment (**Appendix H**).

In conclusion, thallium was not considered a final COPEC for the Harrison Bayou watershed because:

- There was no evidence of thallium contamination in the watershed surface water samples.
- Direct contact hazards and CBR HQs are generally acceptable.
- Wildlife surface water-associated EEQs, although above 1, are overestimated due to the unrealistically elevated thallium surface water-to-fish BCF. Measured fish tissue samples collected from Caddo Lake were nondetect for thallium.
- Thallium was infrequently detected in surface water (less than 3 percent) and concentrations have declined over time.

10.3.9.4 Saunders Branch

Thallium was not selected as a COPEC in surface waters collected from this watershed, as it was not detected. Based on this finding, thallium is not considered a final COPEC for the Saunders Branch watershed.

10.3.10 Vanadium

This section summarizes all of the lines of evidence for vanadium in surface water presented in the Step 3 evaluation, and provides a recommendation as to whether the chemical should be carried forward to the BERA as a final COPEC. It should be noted that vanadium is not known to be related to any processes at the installation (**Section 1.3.10**).

10.3.10.1 Goose Prairie Creek

Vanadium was not selected as a preliminary COPEC in surface water (**Table 6-28**). Therefore, vanadium is not a final COPEC for the Goose Prairie Creek watershed.

10.3.10.2 Central Creek

Vanadium was not selected as a final COPEC based on findings presented below.

The maximum vanadium EEQ for aquatic receptors for this watershed was 2.6 for the River Otter, based on the NOAEL Tier 1 approach. Other aquatic receptors had EEQ less than 1. The maximum Raccoon and Raccoon (Louisiana Black Bear) EEQs were also less than 1. For the River Otter almost 100 percent of the EEQ was associated with surface water (from fish ingestion).

For the direct contact assessment vanadium concentrations were not a concern, as a majority of the available surface water screening criteria were not exceeded, and no promulgated criteria were exceeded (**Table 7-11**). For the CBR evaluation using the fathead minnow as the modeled receptor, the Tier 1 NOAEL-based HQ exceeded 1 (12.5), and the Tier 2 NOAEL-based HQ of 2.8 also exceeded 1. (**Table 7-15**). As discussed in **Appendix C**, there is considerable uncertainty associated with the CBR approach. As shown in **Section 8.15**, measured vanadium concentrations in sunfish collected from the Goose Prairie Creek portion of Caddo Lake were nondetect, however vanadium was not detected in surface water of Goose Prairie Creek, but it was detected in sediment.

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that vanadium concentrations measured in this watershed were consistent with background.

Results of the UTL and UPL comparisons showed that vanadium was elevated with respect to background. The WRS test could not be run as one or more of the data sets had more than 50 percent nondetect results. The box and whisker plot was not completed because vanadium was only detected in one site sample.

The small mammal TRV used for both the River Otter and the Raccoon was based on a chronic rat study in which the lowest dose was defined as the LOAEL. A UF of 0.1 was applied to this LOAEL to estimate a NOAEL for vanadium. The actual NOAEL could have occurred at a considerably greater dose level. If a UF of 0.5 was applied instead of 0.1, the estimated NOAEL EEQs would be reduced by a factor of 5, from 2.6 to 0.5 (for the River Otter). However, a UF of 0.1 is the recommended default value.

A spatial evaluation shows that the one detected concentration of vanadium (0.0375 mg/L; out of nine samples) was located in the upper reaches of the watershed (**Appendix H)** and is not likely related to sediment contamination.

Data collected as part of the data gap investigation in September 2004 indicate that vanadium concentrations have declined over time (**Appendix G**).

In conclusion, vanadium was not considered a final COPEC for the Central Creek watershed because:

- Vanadium was only detected in one sample and concentrations have declined over time.
- The wildlife surface water-associated EEQ for the River Otter, although slightly above 1 (e.g., 2.6), is believed to be overestimated due to the unrealistically elevated vanadium surface water-to-fish BCF.
- Geochemical results indicated the concentrations are consistent with background.

10.3.10.3 Harrison Bayou

Vanadium was not selected as a final COPEC based on findings presented below.

The maximum vanadium EEQ for aquatic receptors for this watershed was 8.8 for the River Otter, based on the NOAEL Tier 1 approach. Other aquatic receptors had EEQs less than 1. The maximum Raccoon EEQ was 1.1 and the maximum Raccoon (Louisiana Black Bear) EEQ was less than 1. For the River Otter, almost 100 percent of the EEQ was associated with surface water (from fish ingestion) and for the Raccoon, 72 percent of the EEQ was associated with surface water (mostly from fish ingestion). For these receptors, the surface water-associated EEQs were thus 8.8 for the River Otter (8.8 x 1.00) and 0.8 for the Raccoon (1.1 x 0.72).

For the direct contact assessment vanadium concentrations were not a concern, as a majority of the available surface water screening criteria were not exceeded, and no promulgated criteria were exceeded (**Table 7-7**). For the CBR evaluation using the fathead minnow as the modeled receptor, the Tier 1 NOAEL-based HQs exceeded 1 (23.2), as did the Tier 2 NOAEL-based HQ (4.5) (**Table 7-15**). As discussed in **Appendix C**, there is considerable uncertainty associated with the CBR approach. As shown in **Section 8.15**, measured vanadium concentrations in sunfish collected from the Goose Prairie Creek portion of Caddo Lake were nondetect, however, vanadium was not detected in surface water of Goose Prairie Creek, but it was detected in sediment.

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that vanadium concentrations measured in this watershed were consistent with background.

Results of the UTL and UPL comparisons showed that vanadium was potentially elevated with respect to background. The WRS test was not run as more than 50 percent of the samples in one or both of the data sets was nondetect. The box and whisker plot was not prepared, as only one sample was detected on site.

The small mammal TRV used for the River Otter and Raccoon was based on a chronic rat study in which the lowest dose was defined as the LOAEL. A UF of 0.1 was applied to this LOAEL to estimate a NOAEL for vanadium. The actual NOAEL could have occurred at a considerably greater dose level. If a UF of 0.5 was applied instead of 0.1, the estimated NOAEL EEQs would be reduced by a factor of 5, from 8.8 to 1.8. However, a UF of 0.1 is the recommended default value.

A spatial evaluation shows that the one detected concentration of vanadium (0.15 mg/L, out of seven samples collected) was located east of the central portion of the watershed (**Appendix H**) and is not likely related to sediment.

Data collected as part of the data gap investigation in September 2004 indicate that vanadium concentrations have declined over time (**Appendix G**).

In conclusion, vanadium was not considered a final COPEC for the Harrison Bayou watershed because:

- Vanadium was only detected in one out of seven samples, and concentrations have declined over time.
- The wildlife surface water-associated EEQ for the River Otter, although above 1 (e.g., 8.8), is believed to be overestimated due to the unrealistically elevated vanadium surface water-to-fish BCF.
- Geochemical results indicated the concentrations are consistent with background.

10.3.10.4 Saunders Branch

Vanadium was not selected as a preliminary COPEC in surface water (**Table 6-28**). Therefore, vanadium is not a final COPEC for the Saunders Branch watershed.

10.3.11 Zinc

This section summarizes all of the lines of evidence for zinc in surface water presented in the Step 3 evaluation, and provides a recommendation as to whether the chemical should be carried forward to the BERA as a final COPEC. It should be noted that zinc is associated with general operations of the installation (**Section 1.3.10**).

10.3.11.1 Goose Prairie Creek

Zinc was not selected as a final COPEC based on findings presented below.

The maximum zinc EEQ for aquatic receptors for this watershed was 4.6 for the Belted Kingfisher, based on the NOAEL Tier 1 approach. Other aquatic receptors had the following EEQs: Bank Swallow (2.2), and River Otter and Muskrat (less than 1). The maximum Raccoon and Raccoon (Louisiana Black Bear) EEQs were also less than 1.0. For the Belted Kingfisher and the Bank Swallow 80 percent and less than 1 percent, respectively, of the EEQ was associated with surface water (from fish ingestion for the Belted Kingfisher and from aquatic invertebrates for the Bank Swallow). For these receptors, the surface water-associated EEQs were thus 3.7 for the Belted Kingfisher (4.6 x 0.80) and less than 1 for the Bank Swallow (2.2 x <0.01).

For the direct contact assessment zinc concentrations were not a concern, as a majority of the available direct-contact surface water screening values were not exceeded, and no promulgated criteria were exceeded (**Table 7-9**). For the CBR evaluation, zinc concentrations were a concern, as the Tier 1 CBR NOAEL-based HQ was above 1 (4.5) and the Tier 2 CBR NOAEL-based HQ was also above 1 (2.0) (**Table 7-15**). As discussed in **Appendix C**, there is considerable uncertainty associated with the CBR approach. As shown in **Section 8.15**, measured zinc concentrations in sunfish collected from the Goose Prairie Creek portion of Caddo Lake were approximately 7-fold lower than modeled concentrations, suggesting that modeled fish tissue concentrations are not representative of actual conditions.

Results of the background evaluation (**Appendix F**), based on a geochemical analysis, demonstrated that zinc concentrations measured in this watershed were generally consistent with background, however, two samples (46SW07 and 50SW04) were found to be geochemical outliers and should be considered suspect.

Results of the UTL and UPL comparisons and the WRS test showed that zinc was potentially elevated with respect to background. Given the number of zinc surface water samples collected at this watershed compared with the background data set (41 vs. 13 samples), the UTL and UPL findings are not unexpected. As the site data set is much larger than the background data set, the identification, by chance alone, of detecting higher concentrations in the site samples than in background samples, is quite likely. The box and whisker plot shows that both the median and 75^{th} percentile concentrations are only slightly above the background concentrations for these two statistics.

Surface water-to-fish BCFs used for modeling zinc were 5,000 for the Tier 1 assessment and 2,911 for the Tier 2 assessment, from IAEA (1994) and USEPA (1989, 1999) (**Table 7-24**). An alternative BCF value of 500 is available from IAEA (1994, **Table 7-24**). If this alternative BCF value was used, the Tier 1 EEQ for the Belted Kingfisher would be reduced by 10-fold. This would reduce the Tier 1 Belted Kingfisher surface water-associated EEQ from 3.7 to 0.37. As discussed previously, and as shown in **Section 8.15**, measured zinc concentrations in sunfish collected from the Goose Prairie Creek portion of Caddo Lake were approximately 7-fold lower than modeled concentrations, supporting the assertion that the modeled fish tissue concentrations are not representative of actual conditions.

A spatial evaluation shows that two samples with elevated concentrations of zinc, greater than 0.29 mg/L, are located more than 4,500 feet apart (**Appendix H**).

In conclusion, zinc was not considered a final COPEC for the Goose Prairie Creek watershed because:

- The NOAEL-based Belted Kingfisher surface water-associated EEQ was less than 1 when taking into consideration an alternative surface water-to-fish BCF value, and taking into consideration the finding that measured fish tissue samples collected from Caddo Lake were approximately 7-fold lower than modeled zinc concentrations.
- Other aquatic receptors had surface water-associated EEQs that were less than 1.

- Geochemical results indicated the concentrations are generally consistent with background.
- Elevated detections of zinc in surface water are not indicative of a source area.
- CBR-based HQs are not expected to be a concern, as measured fish tissue zinc concentrations were approximately 7-fold lower than modeled concentrations..

10.3.11.2 Central Creek

Zinc was not selected as a preliminary COPEC in surface water (**Table 6-28**). Therefore, zinc is not a final COPEC for the Central Creek watershed.

10.3.11.3 Harrison Bayou

Zinc was not selected as a preliminary COPEC in surface water (**Table 6-28**). Therefore, zinc is not a final COPEC for the Harrison Bayou watershed.

10.3.11.4 Saunders Branch

Zinc was not selected as a preliminary COPEC in surface water (**Table 6-28**). Therefore, zinc is not a final COPEC for the Saunders Branch watershed.

10.3.12 Bis(2-ethylhexyl)phthalate

This section summarizes all of the lines of evidence for BEHP in surface water presented in the Step 3 evaluation, and provides a recommendation as to whether the chemical should be carried forward to the BERA as a final COPEC. BEHP is not known to be related to any processes at the installation (**Section 1.3.10**), and is also a common laboratory contaminant.

10.3.12.1 Goose Prairie Creek

BEHP was not selected as a final COPEC based on findings presented below.

The maximum BEHP EEQ for aquatic receptors for this watershed was 4.2 for the Belted Kingfisher, based on the NOAEL Tier 1 approach. One hundred percent of this hazard was from the ingestion of fish that may bioaccumulate BEHP from surface water. All other aquatic receptors, including the Raccoon and Raccoon (Louisiana Black Bear) had EEQs that were less than 1.0. The Tier 2 BEHP EEQ for the Belted Kingfisher was below 1 for the NOAEL-based approach.

For the direct contact assessment BEHP concentrations were a concern, as a majority of the available surface water screening criteria were exceeded, however, no promulgated criteria were exceeded (**Table 7-9**). For the CBR evaluation using the fathead minnow as the modeled receptor, the HQ calculated using the Tier 1 and Tier 2 NOAEL approaches were above 1 (11 and 3, respectively) (**Table 7-15**). As discussed in **Appendix C**, there is considerable uncertainty associated with the CBR approach. As shown in **Section 8.15**, measured BEHP concentrations in sunfish collected from the Goose Prairie Creek portion of Caddo Lake were approximately 12-fold lower (for Tier 1) and 7.6-fold lower (for Tier 2) than modeled concentrations, suggesting that modeled fish tissue concentrations are not representative of actual conditions.

The water-to-fish BAF used for the Tier 1 approach was 1,550 from RAIS (ORNL on-line database) and is based on an estimated value using the log Kow for BEHP (**Table 7-24**). For the Tier 2 approach a BCF of 715 was used, which was the average of a value of 7 from USEPA (1999) and a value of 1,423 estimated using the regression equation approach from Bintein and Devillers (1993). This BCF range between the Tier 1 and Tier 2 BCF values (over 2-fold) suggests some uncertainty is associated with the BCF, which is responsible for almost all of the estimated aquatic wildlife hazards. In addition, it should be noted that as total concentrations in surface water were used in the estimation of fish tissue concentrations, not dissolved concentrations, it is very likely that this approach overestimates bioavailability to a considerable degree, and therefore, overestimated the wildlife EEQs. As discussed previously, and as shown in **Section 8.15**, measured BEHP concentrations in sunfish collected from the Goose Prairie Creek portion of Caddo Lake were approximately 7.6 to 12-fold lower than modeled concentrations, supporting the assertion that modeled fish tissue concentrations are not representative of actual conditions.

BEHP was detected in 4 out of 53 surface water samples collected, resulting in a frequency of detection of 7.5 percent.

A spatial evaluation shows that three elevated concentrations of BEHP, greater than or equal to 0.0073 mg/L, are located at least 1,500 feet from one another (**Appendix H**) and are not likely related to concentrations in sediment, as BEHP was not selected as a COPEC in sediment.

In conclusion, BEHP was not considered a final COPEC for the Goose Prairie Creek watershed because:

- The Tier 1 EEQ for the Belted Kingfish was below 1 when taking into consideration an alternative surface water-to-fish BCF value, and taking into consideration the finding that measured fish tissue samples collected from Caddo Lake were approximately 7.6- to 12-fold lower than modeled BEHP concentrations.
- Other aquatic receptors had surface water-associated EEQs that were less than 1.
- No promulgated surface water criteria were exceeded.
- This constituent was only detected in 4 out of 53 surface water samples.

- Results of a spatial evaluation showed that elevated concentrations are isolated within the watershed.
- It is probable that the detections of this COPEC are the result of laboratory contamination, as BEHP is a common laboratory contaminant. However, BEHP was detected at concentrations more than 10 times the concentrations found in associated blanks.

10.3.12.2 Central Creek

As BEHP was not selected as a preliminary COPEC in surface water, it is not considered a final COPEC for the Central Creek watershed.

10.3.12.3 Harrison Bayou

As BEHP was not selected as a preliminary COPEC in surface water, it is not considered a final COPEC for the Harrison Bayou watershed.

10.3.12.4 Saunders Branch

As BEHP was not selected as a preliminary COPEC in surface water, it is not considered a final COPEC for the Saunders Branch watershed.

10.3.13 2,3,7,8-TCDD TEQ

This section summarizes all of the lines of evidence for 2,3,7,8-TCDD TEQ in surface water presented in the Step 3 evaluation, and provides a recommendation as to whether the chemical should be carried forward to the BERA as a final COPEC. It should be noted that there are no known sources of dioxin as a result of installation processes or application (**Section 1.3.10**). Chlorinated organics, such as dioxin, are produced through natural as well as man made processes. Significant amounts of dioxin are produced by nature in peat bogs, during volcanic eruptions, from forest fires, or wherever compounds containing hydrogen, carbon and chlorine are burned. Forest fires may be the single largest source of dioxin in the environment (Gribble, 1994). More than half of the total area at the installation has been subjected to controlled burns to limit vegetation growth since 1975 (Lanis Rieger, Installation Forester, personal communication).

10.3.13.1 Goose Prairie Creek

2,3,7,8-TCDD TEQ was not selected as a final COPEC based on findings presented below.

The maximum 2,3,7,8-TCDD TEQ EEQ for aquatic receptors for this watershed was 21 for the River Otter, based on the NOAEL Tier 1 approach. Almost one hundred percent of this hazard was from the ingestion of fish that may bioaccumulate TCDD from surface water. Other aquatic receptors had the following EEQs: Belted Kingfisher (13); and Muskrat and Bank Swallow (both less than 1). For the Belted Kingfisher 100 percent of the hazard was from fish exposure. The maximum Raccoon EEQ was 5.5 and 66 percent of this hazard was from surface water exposure (i.e., fish ingestion), therefore, the surface water-associated EEQ was 3.6 (5.5 x 0.66). The maximum Raccoon (Louisiana Black Bear) EEQ was 3.2 and 67 percent of this hazard was from surface water exposure (i.e., fish ingestion), therefore, the surface water-associated EEQ was 2.1 (3.2 x 0.67).

For the direct contact assessment 2,3,7,8-TCDD TEQ concentrations were not a concern, as none of the available surface water screening criteria were exceeded, and no promulgated criteria were exceeded (**Table 7-9**). For the CBR evaluation using the fathead minnow as the modeled receptor, the Tier 1 NOAEL-based HQ slightly exceeded 1 (2.3), however, the Tier 2 NOAEL-based HQ was less than 1 (0.3) (**Table 7-15**). As discussed in **Appendix C**, there is considerable uncertainty associated with the CBR approach. As shown in **Section 8.15**, measured 2,3,7,8-TCDD TEQ concentrations in sunfish collected from the Goose Prairie Creek portion of Caddo Lake were nondetect, suggesting that modeled fish tissue concentrations are not representative of actual conditions.

A geochemical analysis was not performed for TCDD as it is not expected to complex with inorganic constituents. UTL and UPL comparisons and the WRS test were not run as TCDD/TCDF surface water samples were not collected for the background assessment.

As discussed in **Section 8.13**, the sample location with the maximum calculated 2,3,7,8-TCDD TEQ concentration within the Goose Prairie Creek watershed (sediment sample 29SW30) only had 0.04 percent of the total TEQ from detected congeners, with the remainder being associated with congener detection limits. This shows that the maximum detected 2,3,7,8-TCDD TEQ concentration of 1.29E-08 mg/L was drastically overestimated (by a factor of approximately 25; 1.29E-08/[1.29E-08 x 0.04]).

The water-to-fish BAF used for the Tier 1 approach was 170,000 from RAIS (ORNL on-line database) and is based on an estimated value using the log Kow for 2,3,7,8-TCDD (**Table 7-24**). For the Tier 2 approach a BCF of 23,084 was used, which was the average of a value of 7,768 from USEPA (1999) and a value of 38,399 estimated using the regression equation approach from Bintein and Devillers (1993). This relatively large BCF range between the Tier 1 and Tier 2 BCF values (over 7.4-fold) suggests considerable uncertainty is associated with the BCF, which is responsible for almost all of the estimated aquatic wildlife hazards. In addition, it should be noted that as total concentrations in surface water were used in the estimation of fish tissue concentrations, not dissolved concentrations, and dioxin has an extremely low water solubility. It is very likely that this approach overestimates bioavailability to a considerable degree and, therefore, overestimated the wildlife EEQs. As discussed previously, and as shown in **Section 8.15**, 2,3,7,8-TCDD, and other dioxin and furan congeners, in sunfish collected from the Goose Prairie Creek portion of Caddo Lake were nondetect, supporting the assertion that modeled fish tissue concentrations are not representative of actual conditions (some modeled results were more than 300-fold greater than one-half of the measurement detection limit).

A spatial evaluation shows that ten samples with elevated concentrations of 2,3,7,8-TCDD TEQ, greater than or equal to 3.78E-09 mg/L, are at least 525 feet apart (**Appendix H**), and three of the ten sample points match locations where elevated concentrations of 2,3,7,8-TCDD TEQ in sediment were found.

In conclusion, 2,3,7,8-TCDD TEQ was not considered a final COPEC for the Goose Prairie Creek watershed because:

- Only 0.04 percent of the total TEQ concentration was from detected congeners, indicating that the maximum detected 2,3,7,8-TCDD TEQ concentration of 1.29E-08 mg/L was overestimated by a factor of approximately 25.
- The use of total concentrations, not dissolved results, likely overestimated bioavailability of this COPEC.
- Surface water-to-fish BCFs (that contributed to almost 100 percent of the elevated EEQs) were overestimated, as some modeled results were more than 300-fold greater than one-half of the measurement detection limit (measured fish tissue samples collected from Caddo Lake were nondetect for 2,3,7,8-TCDD TEQ).

10.3.13.2 Central Creek

2,3,7,8-TCDD TEQ was not selected as a final COPEC based on findings presented below.

The maximum 2,3,7,8-TCDD TEQ EEQ for aquatic receptors for this watershed was 32.1 for the River Otter, based on the NOAEL Tier 1 approach. Ninety-nine percent of this hazard was from the ingestion of surface water-associated prey (fish). Other aquatic receptors had the following EEQs: Belted Kingfisher (18.4); and Muskrat and Bank Swallow (both less than 1). For the Belted Kingfisher 99 percent of the hazard was from surface water exposure (i.e., fish ingestion). The maximum Raccoon EEQ was 19, with 27 percent of this hazard was from surface water exposure (i.e., fish ingestion), resulting in an estimated surface water-associated EEQ of 5.1 (19 x 0.27). The maximum Raccoon (Louisiana Black Bear) EEQ was 4.9 with 63 percent of this hazard was from surface water exposure (i.e., fish ingestion), resulting in an estimated surface water-associated EEQ of 3.1 (4.9 x 0.63).

For the direct contact assessment 2,3,7,8-TCDD TEQ concentrations were a concern as the one available surface water screening criterion was exceeded (**Table 7-11**). For the CBR evaluation using the fathead minnow as the modeled receptor, Tier 1 NOAEL-based HQ slightly exceeded 1

(3.3), however, the Tier 2 NOAEL-based HQ was less than 1 (0.4) (**Table 7-15**). As discussed in **Appendix C**, there is considerable uncertainty associated with the CBR approach.

As discussed in **Section 8.13**, the sample location with the maximum calculated 2,3,7,8-TCDD TEQ concentration within the Central Creek watershed (sediment sample 12SW19) only had 0.04 percent of the total TEQ from detected congeners, with the remainder being associated with congener detection limits. This shows that the maximum detected 2,3,7,8-TCDD TEQ concentration of 1.22E-08 mg/L was drastically overestimated (by a factor of approximately twenty-five; 1.22E-08/[1.22E-08 x 0.04]).

A geochemical analysis was not performed for TCDD as it is not expected to complex with inorganic constituents. UTL and UPL comparisons and the WRS test were not run as TCDD/TCDF surface water samples were not collected for the background assessment.

As discussed in **Section 10.3.13.1**, there is considerable uncertainty is associated with the surface water-to-fish BCF variable that is responsible for almost all of the estimated aquatic wildlife hazards, and as total concentrations in surface water were used in the estimation of fish tissue concentrations, not dissolved concentrations, it is very likely that this approach overestimates bioavailability to a considerable degree, and therefore, overestimated the wildlife EEQs.

A spatial evaluation shows that four samples with elevated concentrations of 2,3,7,8-TCDD TEQ, greater than or equal to 7.4E-09 mg/L, are at least 1,000 feet (**Appendix H**), and one of the four sample points matches a location where elevated concentrations of 2,3,7,8-TCDD TEQ in sediment were found.

In conclusion, 2,3,7,8-TCDD TEQ was not considered a final COPEC for the Central Creek watershed because:

- Only 0.04 percent of the total TEQ concentration was from detected congeners, indicating that the maximum detected 2,3,7,8-TCDD TEQ concentration of 1.22E-08 mg/L was overestimated by a factor of approximately 25.
- The use of total concentrations, not dissolved results, likely overestimated bioavailability of this COPEC.
- It is likely that surface water-to-fish BCFs (that contributed to most of the elevated EEQs) were overestimated.

10.3.13.3 Harrison Bayou

2,3,7,8-TCDD TEQ was not selected as a final COPEC based on findings presented below.

The maximum 2,3,7,8-TCDD TEQ EEQ for aquatic receptors for this watershed was 45.2 for the River Otter, based on the NOAEL Tier 1 approach. Ninety-nine percent of this hazard was from the ingestion of surface water-associated prey (fish). Other aquatic receptors had the following EEQs: Belted Kingfisher (14.4); Bank Swallow (1.5); and Muskrat (less than 1). For the Belted Kingfisher 97 percent of the hazard was from surface water exposure (i.e., fish ingestion). For the Bank Swallow less than 1 percent of the hazard was from surface water exposure (i.e., fish and water ingestion). The maximum Raccoon EEQ was 18.8, and 21 percent of this hazard was from surface water exposure (i.e., fish ingestion), resulting in an estimated surface water-associated EEQ of 3.9 (18.8 x 0.21). The maximum Raccoon (Louisiana Black Bear) EEQ was 4.1, and 57 percent of this hazard was from surface water exposure (i.e., fish ingestion), resulting in an estimated surface water-associated EEQ of 2.3 (4.1 x 0.57).

For the direct contact assessment 2,3,7,8-TCDD TEQ concentrations were not a concern, as none of the available surface water screening criteria were exceeded (**Table 7-7**). For the CBR evaluation using the fathead minnow as the modeled receptor, Tier 1 NOAEL-based HQs slightly exceeded 1 (2.), however, the Tier 2 NOAEL-based HQ was less than 1 (0.3) (**Table 7-15**). As discussed in **Appendix C**, there is considerable uncertainty associated with the CBR approach. As discussed previously, and as shown in **Section 8.15**, 2,3,7,8-TCDD TEQ concentrations in sunfish collected from the Goose Prairie Creek portion of Caddo Lake were nondetect, supporting the assertion that modeled fish tissue concentrations are not representative of actual conditions (modeled results were more than 300-fold greater than the TEQ calculated using one-half of the measurement detection limits for the non-detected congeners).

A geochemical analysis was not performed for TCDD as it is not expected to complex with inorganic constituents. UTL and UPL comparisons and the WRS test were not run as TCDD/TCDF surface water samples were not collected for the background assessment.

As discussed in **Section 8.13**, the sample location with the maximum calculated 2,3,7,8-TCDD TEQ concentration within the Harrison Bayou watershed (surface water sample 18SW27) had 38 percent of the total TEQ from detected congeners, with the remainder being associated with congener detection limits. This shows that the maximum detected 2,3,7,8-TCDD TEQ concentration of 1.42E-08 mg/L was slightly overestimated (by a factor of approximately 2.6-fold; 1.42E-08/[1.42E-08 x 0.38]).

As discussed in **Section 10.3.13.1**, there is considerable uncertainty is associated with the surface water-to-fish BCF variable that is responsible for almost all of the estimated aquatic wildlife hazards. Also, as total concentrations in surface water were used in the estimation of fish tissue concentrations rather than dissolved concentrations, it is very likely that this approach overestimates bioavailability to a considerable degree, and therefore, overestimated the wildlife EEQs.

A spatial evaluation shows that five samples with elevated concentrations of 2,3,7,8-TCDD TEQ, greater than or equal to 3.32E-09 mg/L, are at least 675 feet apart (**Appendix H**), and four of the five sample points match locations where elevated concentrations of 2,3,7,8-TCDD TEQ in sediment were found. It should be noted, however, that as only six surface water samples and five sediment samples were collected, this correlation is likely based on the limited number of samples collected, and not suggestive of a source area.

In conclusion, 2,3,7,8-TCDD TEQ was not considered a final COPEC for the Harrison Bayou watershed because:

- Only some of the total TEQ concentration was from detected congeners, indicating that the maximum detected 2,3,7,8-TCDD TEQ concentration of 1.42E-08 mg/L was overestimated by a factor of approximately 2.6-fold.
- Direct contact hazards and CBR HQs were not a concern.
- The use of total concentrations, and not dissolved results, likely overestimated bioavailability of this COPEC.
- The surface water-to-fish BCF (that contributed to almost all of the elevated EEQs) was overestimated, as dioxins and furans were not detected in sunfish collected from the Goose Prairie Creek Cove area of Caddo Lake.

10.3.13.4 Saunders Branch

2,3,7,8-TCDD TEQ was not selected as a preliminary COPEC in surface water (**Table 6-28**). Therefore, 2,3,7,8-TCDD TEQ is not a final COPEC for the Saunders Branch watershed.

10.4 Summary of Chemicals Identified as Background-Related

COPECs put on the Background List, to be considered during Step 7 by risk managers, are as follows (see **Table 10-1** for a summary):

<u>**SOIL** (see **Table 10-2** for a detailed summary of the COPEC selection process)</u>

Industrial Sub-Area

- Aluminum
- Vanadium
- Dioxins

Waste Sub-Area

- Aluminum
- Vanadium
- Zinc

Low Impact Sub-Area

- Vanadium

SEDIMENT (see **Table 10-3** for a detailed summary of the COPEC selection process)

Goose Prairie Creek

- Aluminum

Central Creek

- Aluminum

Harrison Bayou

- Aluminum

Saunders Branch

- Aluminum
- Vanadium

SURFACE WATER (see **Table 10-4** for a detailed summary of the COPEC selection process)

Goose Prairie Creek

- Aluminum
- Copper
- Iron
- Lead

Central Creek

- Aluminum
- Cadmium
- Copper
- Iron
- Lead

Harrison Bayou

- Aluminum
- Copper
- Iron
- Lead

Saunders Branch

- Lead

10.5 Summary of Final COPECs

This section presents a summary of the COPECs recommended as final COPECs, as discussed in **Sections 10.1**, **10.2**, and **10.3** for soil, sediment, and surface water media, respectively, at LHAAP (see **Table 10-1** for a summary).

SOIL (see **Table 10-2** for a detailed summary of the COPEC selection process)

Industrial Sub-Area

- Cadmium
- Chromium
- Zinc
- Perchlorate

Waste Sub-Area

- Barium
- Cadmium
- Chromium
- Lead (based on new data from Pistol Range)
- 2,4-DNT
- 2,6-DNT
- TNT
- Dioxins

Low Impact Sub-Area

- None selected

SEDIMENT (see **Table 10-3** for a detailed summary of the COPEC selection process)

Goose Prairie Creek

- Lead
- Mercury
- Silver
- Thallium

Central Creek

- Thallium

Harrison Bayou

- Thallium

Saunders Branch

- None selected

SURFACE WATER (see **Table 10-4** for a detailed summary of the COPEC selection process)

- No final COPECs selected

Table 10-1
Summary of Chemicals Selected as Final COPECs for the BERA Step 3

Table 10-2
Summary of Primary Reasons for Not Selecting Soil COPECs as Final Soil COPECs, BERA Step 3

Table 10-3
Summary of Primary Reasons for Not Selecting Sediment COPECs as Final Sediment COPECs, BERA Step 3

Table 10-4
Summary of Primary Reasons for Not Selecting Surface Water COPECs as Final Surface Water COPECs, BERA Step 3

Table 10-1
Summary of Chemicals Selected as Final COPECs for the BERA Step 3

COPEC	Step 3 Final COPEC?										
	Soil			Sediment				Surface Water			
	ISA	WSA	LISA	GPC	CC	HB	SB	GPC	CC	HB	SB
Aluminum	*Bk*	*Bk*	N	*Bk*	*Bk*	*Bk*	*Bk*	*Bk*	*Bk*	*Bk*	N
Barium	N	Yes	N	N	N	N	N	N	N	N	N
Cadmium	Yes	Yes	N	N	N	N	N	N	*Bk*	N	N
Chromium	Yes	Yes	N	N	N	N	N	N	N	N	N
Copper	N	N	N	N	N	N	N	*Bk*	*Bk*	*Bk*	N
Iron	N	N	N	N	N	N	N	*Bk*	*Bk*	*Bk*	N
Lead	N	Yes [a]	N	Yes	N	N	N	*Bk*	*Bk*	*Bk*	*Bk*
Mercury	N	N	N	Yes	N	N	N	N	N	N	N
Silver	N	N	N	Yes	N	N	N	N	N	N	N
Thallium	N	N	N	Yes	Yes	Yes	N	N	N	N	N
Vanadium	*Bk*	*Bk*	*Bk*	N	N	N	*Bk*	N	N	N	N
Zinc	Yes	*Bk*	N	N	N	N	N	N	N	N	N
2,4-DNT	N	Yes	N	N	N	N	N	N	N	N	N
2,6-DNT	N	Yes	N	N	N	N	N	N	N	N	N
TNT	N	Yes	N	N	N	N	N	N	N	N	N
Perchlorate	Yes	N	N	N	N	N	N	N	N	N	N
2,3,7,8-TCDD TEQ	*Bk*	Yes	N	N	N	N	N	N	N	N	N

Notes:

[a] Lead in Waste Sub-Area is final COPEC, based on new Pistol Range soil data.

Bk Chemical was not selected as a COPEC primarily due to the conclusion that it was background-related. Chemical was placed on a "Background List" for consideration by risk managers in Step 7. See text for details.

N not eco hazard driver

Yes ecological hazard driver

Table 10-2
Summary of Primary Reasons for Not Selecting Soil COPECs as Final Soil COPECs [a]
BERA Step 3

COPEC [b]	Sub-Area	Selected as Final COPEC?	Primary Reasons for Not Selecting as Final COPEC: Most Exposed Receptor Had Soil-Associated NOAEL EEQ ≤ 1	Other Receptor NOAEL EEQs ≤ 1 (see previous column)	Background Related via Geochemical Evaluation	Background Related via WRS Test Results	Background Related via UTL or UPL Test Results or Box Plot Comparisons	Alternative Uptake Factor Reduced EEQ(s)	Alternative TRV Reduced EEQ(s) or TRV Effect Not Critical	Spatial Analysis Did Not Show Hot Spot	Direct Contact EEQs ≤ 1	Other	COPEC Put On Background List?
Aluminum	ISA	No			X							X c	**Yes**
	WSA	No			X							X c	**Yes**
Antimony	ISA	No		X			X	X			X		No
	WSA	No			X		X	X			X		No
	LISA	No	X	X							X		No
Barium	WSA	**Yes**											No
Cadmium	ISA	**Yes**											No
	WSA	**Yes**											No
	LISA	No	X (1.1)	X	X		X			X	X		No
Chromium	ISA	**Yes**											No
	WSA	**Yes**											No
	LISA	No			X	X		X		X			No
Lead	ISA	No		X					X		X		No
	WSA	**Yes**											No
	LISA	No		X					X	X			No
Manganese	LISA	No	X	X									No
Mercury	ISA	No	X	X								X d	No
	WSA	No	X	X							X		No
	LISA	No	X	X							X		No
Selenium	ISA	No	X	X	X					X			No
	WSA	No	X	X									No
	LISA	No	X	X									No
Vanadium	ISA	No		X	X					X			**Yes**
	WSA	No		X	X	X	X						**Yes**
	LISA	No		X	X	X	X			X			**Yes**
Zinc	ISA	**Yes**											No
	WSA	No		X	X				X	X			**Yes**
	LISA	No		X					X	X		X e	No
Aroclor 1254	ISA	No	X (1.4)	X						X	X		No
	WSA	No	X	X									No
	LISA	No	X	X									No
DDD	ISA	No		X				X		X		X f	No
	WSA	No	X	X								X f	No
	LISA	No	X	X								X f	No
DDT	ISA	No		X				X				X f	No
	WSA	No	X	X								X f	No
	LISA	No		X				X		X		X f	No
2,4-DNT	WSA	**Yes**											No
2,6-DNT	WSA	**Yes**											No

Table 10-2
Summary of Primary Reasons for Not Selecting Soil COPECs as Final Soil COPECs [a]
BERA Step 3

			Primary Reasons for Not Selecting as Final COPEC										
COPEC [b]	Sub-Area	Selected as Final COPEC?	Most Exposed Receptor Had Soil-Associated NOAEL EEQ ≤ 1	Other Receptor NOAEL EEQs ≤ 1 (see previous column)	Background Related via Geochemical Evaluation	Background Related via WRS Test Results	Background Related via UTL or UPL Test Results or Box Plot Comparisons	Alternative Uptake Factor Reduced EEQ(s)	Alternative TRV Reduced EEQ(s) or TRV Effect Not Critical	Spatial Analysis Did Not Show Hot Spot	Direct Contact EEQs ≤ 1	Other	COPEC Put On Background List?
Hexachlorobenzene	ISA	No	X	X									No
	WSA	No		X					X	X			No
	LISA	No	X	X									No
HMX	WSA	No		X					X	X			No
Pentachlorophenol	LISA	No							X	X	X		No
Perchlorate	ISA	**Yes**											No
	WSA	No	X	X									No
	LISA	No	X	X									No
2,3,7,8-TCDD TEQ	ISA	No				X		X (3.3)		X			**Yes**
	WSA	**Yes**											No
	LISA	No						X (1.5)		X			No
1,3,5-Trinitrobenzene	WSA	No						X	X				No
2,4,6-Trinitrotoluene	WSA	**Yes**											No

Notes:

[a] This table is a generalized summary of Section 10 from the Draft Final Step 3/BERA Report for the Installation-Wide Ecological Risk Assessment, LHAAP.
For details, please refer to Section 10 for a more complete description of the reasons COPECs were not selected as final COPECs.

[b] Only COPEC initially selected as COPECs for this medium (i.e., they screened in because the 95% UCL concentration exceeded conservative screening concentrations) and had at least one receptor EEQ or HQ above 1, are presented on this summary table

[c] Low bioavailability.

[d] Earthworm toxicity value deemed inappropriate.

[e] Non-CERCLA related release.

[f] Assumed legal application of pesticides.

Table 10-3
Summary of Primary Reasons for Not Selecting Sediment COPECs as Final Sediment COPECs [a]
BERA Step 3

COPEC [b]	Water-shed	Selected as Final COPEC?	Primary Reasons for Not Selecting as Final COPEC: Most Exposed Receptor Had Sediment-Associated NOAEL EEQ ≤ 1	Other Receptor NOAEL EEQs ≤ 1 (see previous column)	Background Related via Geochemical Evaluation	Background Related via WRS Test Results	Background Related via UTL or UPL Test Results	Alternative Uptake Factor Reduced EEQ(s)	No Obvious Deposition Area (Spatial Analysis)	Direct Contact Eval. Showed Limited Adverse Effects (< Majority ESVs exceeded)	SED MDC Lower than Clinton Lk. Background	CBR Assessment Showed Limited Adverse Effects or Measured Fish Tissue Results Showed CBR HQ Not a Concern	Other	COPEC Put On Background List?
Aluminum	GPC	No			X				X	X	X	X		**Yes**
	CC	No			X	X			X	X	X	X		**Yes**
	HB	No			X	X			X	X		X		**Yes**
	SB	No			X					X	X	X		**Yes**
Barium	GPC	No	X (1.8)		X					X	X	X		No
	CC	No	X (1.8)		X				X	X		X		No
	HB	No	X (3.8)					X	X	X		X		No
	SB	No	X (2.1)		X	X	X	X		X	X	X		No
Cadmium	GPC	No	X	X	X				X	X		X		No
	CC	No	X	X	X				X	X		X		No
	HB	No	X	X	X				X	X		X	X c	No
	SB	No	X	X	X					X	X	X		No
Copper	GPC	No	X	X	X				X	X		X		No
	CC	No	X	X	X		X			X		X		No
	HB	No	X	X	X		X			X		X		No
	SB	No	X	X	X		X			X		X		No
Lead	GPC	**Yes**												No
Mercury	GPC	**Yes**												No
	CC	No		X	X			X	X	X	X	X		No
	HB	No		X	X			X	X	X		X		No
	SB	No		X	X			X		X	X	X		No
Nickel	CC	No	X	X	X	X	X			X		X		No
	HB	No	X	X	X		X			X		X		No
	SB	No	X	X	X	X	X			X		X		No
Nitrate/Nitrite	GPC	No	X	X						X		X		No
	CC	No	X	X						X		X		No
	HB	No	X	X					X	X		X		No
	SB	No	X	X						X		X		No
Silver	GPC	**Yes**												No
Thallium	GPC	**Yes**												No
	CC	**Yes**												No
	HB	**Yes**												No
Vanadium	SB	No		X	X	X	X			X		X		**Yes**
Zinc	GPC	No		X				X		X		X		No
	CC	No	X	X	X		X		X	X	X	X		No
	HB	No	X	X	X		X			X		X		No

Table 10-3
Summary of Primary Reasons for Not Selecting Sediment COPECs as Final Sediment COPECs [a]
BERA Step 3

			Primary Reasons for Not Selecting as Final COPEC											
COPEC [b]	Water-shed	Selected as Final COPEC?	Most Exposed Receptor Had Sediment-Associated NOAEL EEQ ≤ 1	Other Receptor NOAEL EEQs ≤ 1 (see previous column)	Background Related via Geochemical Evaluation	Background Related via WRS Test Results	Background Related via UTL or UPL Test Results	Alternative Uptake Factor Reduced EEQ(s)	No Obvious Deposition Area (Spatial Analysis)	Direct Contact Eval. Showed Limited Adverse Effects (< Majority ESVs exceeded)	SED MDC Lower than Clinton Lk. Background	CBR Assessment Showed Limited Adverse Effects or Measured Fish Tissue Results Showed CBR HQ Not a Concern	Other	COPEC Put On Background List?
	SB	No	X (1.15)	X	X		X			X		X		No
BEHP	HB	No	X	X					X			X	X e	No
	SB	No	X	X					X			X	X e	No
2,3,7,8-TCDD TEQ	GPC	No	X	X		X			X	X		X		No
	CC	No	X (1.5)	X					X			X		No
	HB	No	X (2.4)	X					X			X		No
	SB	No	X (1.1)	X					X			X		No

Notes:

[a] This table is a generalized summary of Section 10 from the Draft Final Step 3 Report for the Installation-Wide Ecological Risk Assessment, LHAAP. For details, please refer to Section 10 for a more complete description of the reasons COPECs were not selected as final COPECs.

[b] Only COPEC initially selected as COPECs for this medium (i.e., they screened in because the 95% UCL concentration exceeded conservative screening concentrations) and had at least one receptor EEQ or HQ above 1, are presented on this summary table

[c] Infrequently detected (< 3 percent).

[d] No direct evidence of contamination.

[e] Possible laboratory contaminant.

Table 10-4
Summary of Primary Reasons for Not Selecting Surface Water COPECs as Final Surface Water COPECs[a]
BERA Step 3

COPEC [b]	Water-shed	Selected as Final COPEC?	Primary Reasons for Not Selecting as Final COPEC												
			Most Exposed Receptor Had Surface Water-Associated NOAEL EEQ ≤ 1	Other Receptor NOAEL EEQs ≤ 1 (see previous column)	Background Related via Geochemical Evaluation	Background Related via WRS Test Results	Background Related via UTL or UPL Test Results	Measured Fish Tissue or Alternative Uptake Factor Reduced EEQ(s)	Detections Isolated (Spatial Analysis)	Direct Contact Eval. Showed Limited Adverse Effects (No Promulgated Criteria Exceeded and < Majority ESVs exceeded)	CBR Assessment Showed Limited Adverse Effects or Measured Fish Tissue Results Showed CBR HQ Not a Concern	No Direct Evidence of Contamina-tion	Infrequently Detected	Other	COPEC Put On Background List?
Aluminum	GPC	No	X	X	X	X					X				**Yes**
	CC	No	X	X	X	X					X				**Yes**
	HB	No	X	X	X	X					X				**Yes**
Cadmium	CC	No	X	X	X				X		X		X		**Yes**
Chromium	HB	No	X (1.6)	X	X			X	X	X	X				No
Copper	GPC	No	X	X	X						X				**Yes**
	CC	No	X	X	X						X				**Yes**
	HB	No	X	X	X						X				**Yes**
Iron	GPC	No	NA	NA	X	X	X				X				**Yes**
	CC	No	NA	NA	X	X	X				X				**Yes**
	HB	No	NA	NA	X	X					X				**Yes**
Lead	GPC	No	X	X		X					X			X[c]	**Yes**
	CC	No	X	X	X				X		X				**Yes**
	HB	No	X	X	X						X				**Yes**
	SB	No	X	X			X				X				**Yes**
Manganese	GPC	No	X	X		X	X			X	X				No
	CC	No	X	X		X	X			X	X				No
	HB	No	X	X	X					X	X				No
Nitrate/Nitrite	GPC	No	NA	NA						X	NA				No
	CC	No	NA	NA						X	NA				No
	HB	No		NA		X		X		X	NA				No
Thallium	GPC	No						X		X	X	X			No
	HB	No						X		X	X	X	X		No
Vanadium	CC	No	X (2.6)	X	X			X	X	X	X		X		No
	HB	No		X	X			X	X	X	X		X		No
Zinc	GPC	No		X	X			X	X	X	X				No
BEHP	GPC	No		X				X	X		X		X	X[d]	No
2,3,7,8-TCDD TEQ	GPC	No						X		X	X			X[e,f]	No
	CC	No						X			X			X[e,f]	No
	HB	No						X		X	X			X[e,f]	No

Notes and Abbreviations:

[a] This table is a generalized summary of Section 10 from the Draft Final Step 3 Report for the Installation-Wide Ecological Risk Assessment, LHAAP.
For details, please refer to Section 10 for a more complete description of the reasons COPECs were not selected as final COPECs.

[b] Only COPEC initially selected as COPECs for this medium (i.e., they screened in because the 95% UCL concentration exceeded conservative screening concentrations) and had at least one receptor EEQ or HQ above 1, are presented on this summary table

[c] Background related via box and whisker plot evaluation.

[d] Possible laboratory contaminant.

[e] Results from nondetect TCDD congeners biased the assessment (i.e., assuming congeners were present at one-half the detection limit was an overly conservative approach).

[f] Low bioavailability.

NA Not Available (e.g., no TRV or CBR value available to calculate EEQ or HQ).

11.0 Revised Conceptual Site Model, Risk Questions, and Scientific/Management Decision Point

This section uses Step 3 conclusions to generate a revised CSM and to formulate appropriate risk questions for the installation. This section concludes with a SMDP for the final COPECs selected for soil and sediment at LHAAP (summarized in **Section 10.5**) in which the risk questions are addressed and a recommendation for further study (Steps 4, 5, 6, 7, and 8) (**Volume II**) is presented.

11.1 Revised Conceptual Site Model

The refinement of final COPECs in Step 3 is based on information and analysis of the ecological system at LHAAP as represented by the ecological conceptual exposure model presented in **Figure 4-6**. Following the selection of final COPECs, the model was modified to eliminate receptors that were determined not to be problematic and to eliminate pathways that were determined not to be significant. The revised model is used to guide what information needs to be collected during Steps 4 through 8 (**Volume II**) to further refine potential threats to the environment.

Tables 11-1 and **11-2** present the final COPECs for soil and sediment, respectively (no chemicals were selected as final COPECs for surface water), and the pathways of concern that are refined in Steps 4 through 8. All measurement receptors that exceeded an EEQ of 1 are listed in these two tables, and any exposure pathway that resulted in an intake dose that exceeded the NOAEL is listed, as well. It should be noted that EEQs for perchlorate for all receptors were below 1; however, due to the uncertainties associated with this compound's toxicity and uptake at the time the BERA Field Sampling Work Plan (Shaw, 2006b) was prepared, perchlorate was selected as a final COPEC for evaluation.

The conceptual exposure model presented in **Figure 11-1** has been revised to highlight exposure pathways that represent unacceptable hazard to specific receptors based on the information presented in **Tables 11-1** and **11-2**. These pathways (i.e., the non-shaded cells in **Figure 11-1**) are considered for further refinement during Steps 4 through 8 (**Volume II**). The modifications to the model include the following:

- ***Elimination of Receptors.*** The following receptors have been removed from the model, either because they did not exceed an EEQ of 1 for any final COPEC, or because toxicity information necessary for further evaluation is lacking (i.e., reptile and amphibian toxicity data): Muskrat, Common Snapping Turtle, and River Otter. Furthermore, the fathead minnow and brown bullhead catfish can be eliminated from the Aquatic Life receptor category because of the lack of final COPECs in surface water (minnow) and because collected fish tissue data (USEPA, 2004) show body burden concentrations are below the levels of concern (catfish).

- ***Elimination of Exposure Pathways.*** Surface water ingestion and direct contact pathways have been eliminated because no final COPECs were identified in surface water (however, some COPECs in surface water have been placed on the background list). The sediment ingestion, aquatic plant ingestion, and fish ingestion pathways have also been eliminated because these pathways did not result in unacceptable risk for any receptor (**Tables 11-1** and **11-2**).

- ***Refinement of Receptors Affected by Various Exposure Pathways.*** Individual receptors have been removed from specific pathways that did not result in elevated hazard (i.e., EEQs greater than 1). For example, small mammal ingestion was not identified as a significant pathway for the Raccoon for any of the final COPECs (**Table 11-1**). Therefore, this pathway does not need to be investigated in the BERA field sampling program for this receptor.

- ***Ingestion of Mammals and Birds as Prey.*** A site-specific field study was conducted as part of an expanded Step 3 effort to determine BAFs for soil to small mammals (see **Appendix D**). Because uptake factors for birds are generally not available in the literature and field studies of this type are difficult, mammal uptake factors are used as surrogates for birds as well. Because these uptake factors have already been refined by field studies, additional investigation was not conducted. It should be noted that explosives were not detected in soil samples during the field study and therefore, explosives analysis in rodents was not performed. The BERA Step 3 used surrogate organics results for soil and small mammal samples to be conservatively representative of explosives bioaccumulation for the soil-to-mammal and soil-to-bird pathways.

It is important to note that the refinement of the conceptual exposure model is done primarily for the purpose of identifying pathways that are being refined further in this BERA and is not meant to imply that specific receptors and pathways are being eliminated permanently from the LHAAP conceptual model. For example, even though surface water ingestion was not shown to be a significant pathway and is shaded in **Figure 11-1**, hazards associated with ingestion of chemicals in surface water will still be included in the food chain model for the purposes of estimating cumulative hazard associated with chemicals detected in site media. The information obtained is used in Step 7, Risk Characterization (**Volume II**), where total doses for each wildlife receptor are calculated using site-specific bioaccumulation data collected during the field sampling for some COPECs, and also using bioaccumulation data from the literature.

11.2 Risk Questions

Ecological risk questions are questions about the relationship among assessment endpoints and their predicted responses when exposed to COPECs. Risk questions are based on assessment endpoints and provide a basis for further study (**Volume II**). Specific risk questions support the evaluations for each assessment endpoint. For this purpose a risk question can be stated as the following: "Is exposure to a site contaminant causing adverse effects to the selected assessment endpoint?" In general, if the answer to the risk question is yes, then the implication is that the viability or sustainability of populations of the ecological functional group is likely to be reduced based on the measurement endpoints selected. Similarly, if the answer to the risk question is no, then the implication is that the viability or sustainability of populations of the ecological functional group is not likely to be reduced based on the measurement endpoints selected.

Based on the information presented in Step 3, concentrations of the final COPECs in soil and sediment have the potential to reduce the viability or sustainability of populations of at least some of the evaluated measurement receptors. Therefore, these final COPECs are most likely to be site-related and, based on multiple lines of evidence (e.g., direct toxicity evaluation, food chain modeling, etc.), have a reasonable probability of potentially adversely affecting ecological receptors. Thus, these chemicals require further consideration, such as risk management, remedial action, additional ecological study, and/or continued monitoring. Further ecological study is recommended at this juncture.

Specific risk questions that have been developed for the assessment endpoints and that will be addressed in Steps 4 through 8 (**Volume II**), are presented as follows:

Assessment Endpoint No. 1: Survival, growth, and reproduction of aquatic biota living in sediment

- Does exposure to site sediment cause reduced survival, growth, or reproduction for invertebrates in sediment?
- Are metal COPECs bioavailable such that exposure to site sediment causes reduced survival, growth, or reproduction for invertebrates in sediment?

Assessment Endpoint No. 2: Survival, growth, and reproduction of birds and mammals

- Does the consumption of COPEC concentrations in laboratory-measured freshwater aquatic invertebrates infer reduced survival, growth, or reproduction for birds?
- Does the consumption of COPEC concentrations in field-collected plants infer reduced survival, growth, or reproduction for mammals?
- Does the consumption of COPEC concentrations in laboratory-measured earthworms infer reduced survival, growth, or reproduction for birds and mammals?
- Does the consumption of COPECs in diet, plus incidental surface water, soil, and sediment ingestion, infer reduced survival, growth, or reproduction for birds and mammals?

- Does the consumption of trivalent chromium or hexavalent chromium in diet, plus incidental soil ingestion, infer reduced survival, growth, or reproduction for birds and mammals?
- Does the consumption of COPECs in diet, plus incidental soil ingestion, infer reduced reproduction for mammals?

Assessment Endpoint No. 3: Protection of terrestrial plant and invertebrate populations (base of the food chain receptors)

This assessment endpoint is included as part of a project-specific agreement with LHAAP stakeholders in which organisms at the base of the food chain are evaluated as assessment endpoints, but remediation decisions will not be made based on the results of this evaluation. Therefore, no risk questions are needed.

These specific risk questions are discussed further in Step 4, Study Design and Data Quality Objectives Process (**Volume II)**.

11.3 Scientific/Management Decision Point

At the conclusion of Step 3 there is a SMDP (**Figure 1-1**). The SMDP consists of agreement on four items: (1) final COPECs, (2) assessment endpoints, (3) exposure pathways, and (4) risk questions. Final COPECs are summarized in **Section 10.5** and were also presented to stakeholders through separate project deliverables (Shaw, 2006a and 2006b). Assessment endpoints, exposure pathways, and risk questions are presented in **Section 11.1** and **Section 11.2** and were also presented to stakeholders in the BERA Field Sampling Work Plan, Longhorn Army Ammunition Plant, Karnack, Texas (Shaw, 2006b). Based on this information further investigation is recommended and is presented and discussed in Steps 4 through 8 (**Volume II**).

Table 11-1
Summary of Ecologically Significant Exposure Pathways for Final COPECs in Soil

Table 11-2
Summary of Ecologically Significant Exposure Pathways for Final COPECs in Sediment

00050118

Table 11-1
Summary of Ecologically Significant Exposure Pathways for Final COPECs in Soil

Final COPEC [a]	Sub-Area	Receptors With EEQs > 1	Pathways of Concern [b]	Pathways to be Addressed in the BERA for Each Analytical Group	Study Proposed for BERA
Metals					
Barium	WSA	DM	Soil-Plant		
			Soil-Earthworm		
		TBEB	Soil-Plant		
		STS	Soil Ingestion	Soil Ingestion	
			Soil-Earthworm		
		AW	Soil-Earthworm	Soil-Plant	Tissue residue study for plants
		RAC	Soil-Plant		
Cadmium	ISA, WSA	STS	Soil-Earthworm	Soil-Earthworm	Tissue residue study for earthworms
Chromium	ISA, WSA	AW	Soil-Earthworm		
		STS	Soil-Earthworm		
Lead	WSA	AW	Soil-Earthworm		
Zinc	ISA	AW	Soil-Earthworm		
Perchlorate					
Perchlorate	ISA	TBEB [c]	Soil-Plant [c]	Soil-Plant	Tissue residue study for plants
Explosives					
2,4-DNT	WSA	STS	Soil Ingestion		
			Soil-Earthworm		
		RF	Soil-Earthworm		
			Soil-Plant		
			Soil-Mammals		
			Soil-Birds		
		DM	Soil-Earthworm		
		RAC	Soil-Earthworm		
			Soil-Plant		
2,6-DNT	WSA	STS	Soil-Earthworm		
		RAC	Soil-Earthworm		
		DM	Soil-Earthworm	Soil Ingestion	
			Soil-Plant		
		RF	Soil-Mammals	Soil-Plant	Tissue residue study for plants
2,4,6-TNT	WSA	DM	Soil Ingestion		
			Soil-Earthworm	Soil-Earthworm	Tissue residue study for earthworms
			Soil-Plant		
		RAC	Soil Ingestion	Soil-Mammals	This pathway previously addressed via site-specific studies
			Soil-Earthworm		
			Soil-Plant	Soil-Birds	This pathway previously addressed via site-specific studies
			Soil-Mammals		
		RAC (LBB)	Soil Ingestion		
			Soil-Earthworm		
			Soil-Plant		
			Soil-Mammals		
		STS	Soil Ingestion		
			Soil-Earthworm		
		RF	Soil Ingestion		
			Soil-Earthworm		
			Soil-Plant		
			Soil-Mammals		
			Soil-Birds		
		TBEB	Soil-Plant		
		AW	Soil Ingestion		
			Soil-Earthworm		
		RTH	Soil Ingestion		
			Soil-Mammals		
			Soil-Birds		
Dioxin					
2,3,7,8-TCDD TEQ	WSA	STS	Soil-Earthworm		
		DM	Soil-Earthworm		
		RAC	Soil-Earthworm	Soil-Earthworm	Additional characterization is not proposed for dioxin.
		RAC (LBB)	Soil-Earthworm		
		AW	Soil-Earthworm		

Notes and Abbreviations:

[a] Chemical selected as a final COPEC in Step 3 in at least one terrestrial sub-area.

[b] Pathways that resulted in an ecological effects quotient (EEQ) greater than 1.

[c] EEQs for perchlorate are not above 1. However, the Bat represents the receptor with the highest intake dose for perchlorate. The soil-plant pathway was the most significant pathway for the bat (bat diet assumed to be 100 percent moths, which were assumed to have a 1:1 concentration ratio with plants). Due to the uncertainties associated with perchlorate toxicity at the time the BERA Work Plan was prepared, this compound was selected as a final COPEC for evaluation in the BERA field sampling program.

Sub-Areas: ISA Industrial Sub-Area; WSA Waste Sub-Area

Receptors: AW American Woodcock; DM Deer Mouse; RAC Raccoon; RAC (LBB) Raccoon (Louisiana Black Bear); RF Red Fox; RTH Red-Tailed Hawk; STS Short-tailed Shrew; TBEB Townsend's Big-Eared Bat

Bolded receptors are the most exposed receptor overall, for that chemical.

BERA baseline ecological risk assessment
COPEC chemical of potential ecological concern
EEQ ecological effects quotient

Table 11-2
Summary of Ecologically Significant Exposure Pathways for Final COPECs in Sediment

Final COPEC [a]	Watershed	Receptors With EEQs > 1	Pathways of Concern [b]	Pathways to be Addressed in the BERA	Study Proposed for BERA
Metals					
Lead	GPC	BS	Sediment-Invertebrates		
		Benth. Inv.	Direct Contact	Sediment-Invertebrates →	Tissue residue study for benthic invertebrates / AVS-SEM
Mercury	GPC	BS	Sediment-Invertebrates		
		BK	Sediment-Invertebrates	Direct Contact →	Toxicity studies for benthic invertebrates / AVS - SEM
		Benth. Inv.	Direct Contact		
Silver	GPC	Benth. Inv.	Direct Contact	→ Direct Contact →	Toxicity studies for benthic invertebrates / AVS - SEM
Thallium	GPC	RAC	Sediment-Invertebrates		
		RAC (LBB)	Sediment-Invertebrates		
Thallium	HB	RAC	Sediment-Invertebrates	→ Sediment-Insects →	Tissue residue study for benthic invertebrates / AVS-SEM
		RAC (LBB)	Sediment-Invertebrates		
Thallium	CC	RAC	Sediment-Invertebrates		
		RAC (LBB)	Sediment-Invertebrates		

Notes:

[a] Chemical selected as a final COPEC in Step 3 in at least one terrestrial sub-area.

[b] Pathways that resulted in an ecological effects quotient (EEQ) greater than 1.

Watershed: GPC Goose Prairie Creek; HB Harrison Bayou; CC Central Creek

Receptors: BS Bank Swallow; Benth. Inv. Benthic Invertebrates; BK Belted Kingfisher; RAC Raccoon; RAC (LBB) Raccoon (Louisiana Black Bear)

Bolded receptors are the most exposed receptor overall.

AVS - SEM acid volatile sulfides (simultaneously extracted metals)

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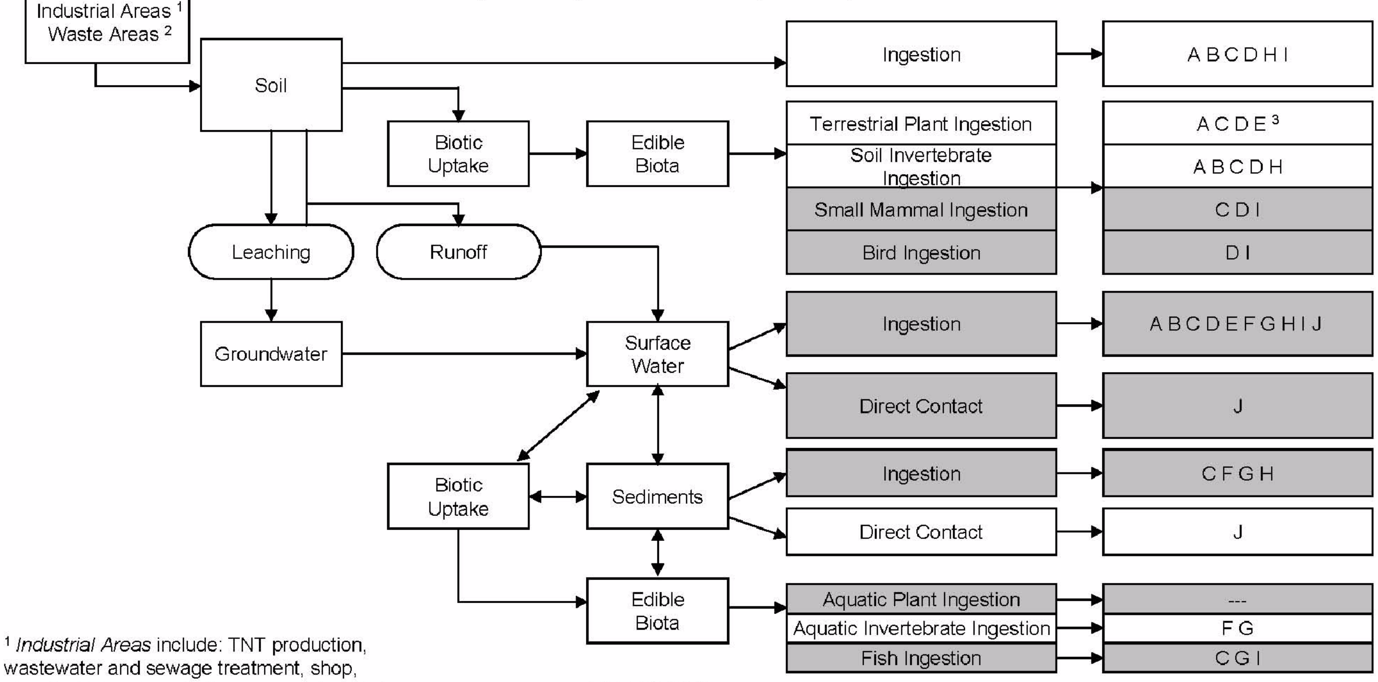
OFFICE	DRAWN BY		CHECKED BY		APPROVED BY		FILE PATH
Houston, TX	*B. Lu*	*12/04/06*	*J. Lindberg*	*12/04/06*	*K. Everett*	*12/04/06*	*T:\GIS\LHAAP\MXD\Step3Eco\FigsFromPP\Fig11-1.mxd*

Figure 11-1

**Revised Ecological Conceptual Exposure Model,
Longhorn Army Ammunition Plant, Karnack, Texas**



[1] *Industrial Areas* include: TNT production, wastewater and sewage treatment, shop, chemical laboratory, test areas, pyrotechnic/ rocket motor production, and pesticide storage area

[2] *Waste Areas* include: landfills, burning grounds, and waste disposal areas

[3] Although the Bat is assumed to ingest moths, the moths are considered an indirect pathway for ingestion of chemicals in plants, which are the expected food items of the moths.

RECEPTORS

A. Deer Mouse
B. Short-tailed Shrew
C. Raccoon (& Raccoon [Louisiana Black Bear])
D. Red Fox
E. Townsend's Big-Eared Bat
F. Bank Swallow
G. Belted Kingfisher
H. American Woodcock
I. Red-tailed Hawk
J. Aquatic Life (benthic invertebrates)

--- = All receptors exposed to this pathway were determined not to be of concern.

Shaded cells indicate pathways that were not identified as significant, are background related, or have already been refined via site-specific investigations, and will not be a focus of field studies for the baseline ecological risk assessment.

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TULSA DISTRICT
TULSA, OKLAHOMA

FIGURE 11-1

REVISED ECOLOGICAL
CONCEPTUAL EXPOSURE MODEL

LONGHORN ARMY AMMUNITION PLANT
KARNACK, TEXAS

Appendices A – K / Exhibit 1
(on compact disks)

Appendix A

TCEQ Bioaccumulative Chemicals for the Step 3 Ecological Risk Assessment

Appendix A

TCEQ Bioaccumulative Chemicals
for the
Installation-Wide Baseline Ecological Risk Assessment
Volume I: Step 3 Report

Table A-1. Bioaccumulative COCs
Ecological Risk Assessment, LHAAP, Karnack, Texas

CAS#	COC	Applicable Media
	Metals	
7440-43-9	Cadmium	Sediment, Soil
7440-47-3	Chromium	Soil
7440-50-8	Copper	Sediment, Soil
7439-92-1	Lead	Soil
7439-97-6	Mercury	Water, Sediment, Soil
744-02-0	Nickel	Sediment, Soil
7782-49-2	Selenium	Water, Sediment, Soil
7440-28-0	Thallium	Water
688-73-3	Tributyltin	Sediment
7440-66-6	Zinc	Sediment, Soil
	Organochlorine Pesticides	
309-00-2	Aldrin	Sediment, Soil
57-74-9	Chlordane [a]	Sediment, Soil
72-54-8	DDD	Water, Sediment, Soil
72-55-9	DDE	Water, Sediment, Soil
50-29-3	DDT	Water, Sediment, Soil
60-57-1	Dieldrin	Sediment, Soil
72-20-8	Endrin	Sediment, Soil
76-44-8	Heptachlor	Sediment, Soil
1024-57-3	Heptachlor epoxide	Sediment, Soil
8001-35-2	Toxaphene	Sediment, Soil
	Other Pesticides and PCBs	
2385-85-5	Mirex	Sediment, Soil
3980-114-4	Photomirex	Sediment, Soil
1336-36-3	PCBs	Water, Sediment, Soil
	Other Semi-Volatiles	
none	Dioxins	Water, Sediment, Soil
none	Furans	Water, Sediment, Soil
118-74-1	Hexachlorobenzene	Water, Sediment, Soil
608-73-1	Hexachlorocyclohexanes	Sediment, Soil
29082-74-4	Octachlorostyrene	Water, Sediment, Soil
87-86-5	Pentachlorophenol	Sediment, Soil

[a] Includes chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane).

CAS – Chemical Abstracts Service
COC – contaminant of concern
DDE – dichlorodiphenyldichloroethylene
DDT – dichlorodiphenyltrichloroethane
LHAAP – Longhorn Army Ammunition Plant
DDD – dichlorodiphenyldichloroethan
PCB – polychlorinated biphenyl

Appendix B

TrophicTrace® Model Results

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Table B-2b Tier 1 Aquatic Hazard Estimates Based on Estimated Tissue Concentrations, Harrison Bayou Watershed, LHAAP

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Attachment 1 TrophicTrace® Model Output

APPENDIX B
TROPHICTRACE® MODEL RESULTS

B.1 Model Results

For sediment constituents of potential ecological concern (COPEC), fish tissue concentrations in the brown bullhead catfish (*Ictalurus nebulosus*) were estimated using the computer software TrophicTrace®. Catfish were selected as the target species for this modeling exercise due to their close association with sediments, and the brown bullhead in particular was selected due to its expected presence at Longhorn Army Ammunition Plant and its listing as an aquatic biota target species (see Table 4-12 in the *Work Plan for the Installation-Wide Ecological Risk Assessment,* Jacobs, 2003).

The TrophicTrace® software, sponsored by the U.S. Army Corps of Engineers Waterways Experiment Station to evaluate dredge disposal options (http://www.wes.army.mil/el/trophictrace), uses a variety of trophic modeling approaches. For organic COPECs, the Gobas (1993) TrophicTrace® module was used to model COPEC transfer from sediment to fish tissue, using food-chain modeling and uptake across the gills.

For cadmium, chromium, copper, lead, mercury, nickel, silver, and zinc COPECs, the trophic transfer factor (TTF) TrophicTrace® module was used to model COPEC transfer from sediment to benthic invertebrates to fish. TTFs for these inorganics (for the transfer of COPECs in invertebrates to fish via ingestion) were obtained from the U.S. Environmental Protection Agency (USEPA, 2000). Concentrations in benthic invertebrates (Table B-1) were estimated using benthic sediment accumulation factors (BSAFs) from Table 7-20, converting dry weight BSAFs to wet weight BSAFs using a factor of 0.2 when necessary. The conversion factor of 0.2 was based on an average moisture content of aquatic worms of 80 percent (USEPA, 1999).

For the remaining inorganic COPECs that did not have readily available TTFs, the TrophicTrace® bioconcentration factors (BCF) module was used to model COPEC transfer from sediment to pore water (using equilibrium partitioning coefficients) to fish tissue (using BCF). BCFs were obtained from Table 7-22, converting dry weight BCFs to wet weight BCFs using a factor of 0.2 when necessary. The conversion factor of 0.2 was based on an average moisture content of fish of 80 percent (USEPA, 1999).

The Tier 1 approach used upper-bound BSAFs or BCFs and 95% upper confidence limit exposure point concentrations, while the Tier 2 approach used average BSAFs or BCFs and average exposure point concentrations. Two of the TrophicTrace® modules (the Gobas [1993] approach and the BCF approach) required the input of sediment total organic carbon (TOC) concentrations. For the Tier 1 approach, the geometric average TOC concentration was generally used for each watershed, while for the Tier 2 approach, the arithmetic average TOC concentration was generally employed, summarized as follows:

Variable	Central Creek	Goose Prairie Creek	Harrison Bayou	Saunders Branch
Sediment Sample Size	13	40	1	4
Geometric Average TOC	4.0 %	12.7 %	7.3 % [a] (25.9 %)	5.1 %
Arithmetic Average TOC	6.1 %	22.4 %	11.6 % [a] (25.9 %)	6.2 %

[a] As Harrison Bayou only had TOC results available from one sediment sample (presented in parentheses), the results were deemed unrepresentative, and the average of the three other watersheds was used.

Other inputs required for the TrophicTrace® model included a dissolved organic carbon concentration in surface water (set at 2.0 milligrams/liter [mg]/[L]) and a particulate organic carbon concentration in surface water (set at 0.0075 mg/L), both from USEPA (1999). A whole-body lipid content of 2.2 percent was used for the brown bullhead (USEPA, 1997), while a whole body lipid content of 1.257 percent was used for freshwater benthic invertebrates (U.S. Army Corps of Engineers Waterways Experiment Station, 2004).

Estimated brown bullhead COPEC tissue concentrations (from the TrophicTrace® model), as well as sediment COPEC exposure point concentrations used, are summarized in Tables B-2(a) through B-2(h). TrophicTrace® model output files are presented in Attachment 1.

B.2 References

Gobas, F.A.P.C., 1993, *A model for predicting the bioaccumulation of hydrophobic organic chemicals in aquatic food-webs: application to Lake Ontario*, **Ecol. Modeling** 69:1-17.

Jacobs Engineering Group, Inc., 2003, *Draft Final Work Plan for the Installation-Wide Ecological Risk Assessment*, Longhorn Army Ammunition Plant, Karnack, Texas, prepared for the U.S. Army Corps of Engineers, Tulsa District, July.

U.S. Army Corps of Engineers Waterways Experiment Station (WES), 2004, on-line Environmental Residue Effects Database (ERED), Lipid Data by Organism Group (http://ered1.wes.army.mil/cgi-bin/LipidOrgMean.exe).

U.S. Environmental Protection Agency (USEPA), 1997, *The Incidence and Severity of Sediment Contamination in Surface Waters of the United States, Volume 1: National Sediment Quality Survey*, Appendix C, Method for Selecting Biota-Sediment Accumulation Factors and Percent Lipids in Fish Tissue Used for Deriving Theoretical Bioaccumulation Potentials, EPA 823-R-97-006, September.

USEPA, 1999, *Screening Level Ecological Risk Assessment Protocol for Hazardous Waste Combustion Facilities*, EPA 530-D-99-001C, November, Peer Review Draft.

USEPA, 2000, *Proposed changes to the bioaccumulation testing evaluation framework and response to scientific peer reviewers comments on the existing framework for determining the suitability of dredged material to be placed at the Historic Area Remediation Site (HARS)*, USEPA, Region 2, New York, October.

Table B-1
Estimation of Aquatic Worm Inorganic COPEC Concentrations for Use in Fish Hazard Evaluation, LHAAP

Sediment COPEC	Tier 1			Tier 2		
	BSAF [a]	Sediment Conc. (mg/kg)	Estimated Aq. Worm Conc. (mg/kg)	BSAF [a]	Sediment Conc. (mg/kg)	Estimated Aq. Worm Conc. (mg/kg)
Central Creek Watershed						
Aluminum	0.9	9690	8,721	0.9	8090	7,281
Barium	0.9	132	119	0.9	118	106
Cadmium	7.99	0.548	4.38	0.6	0.457	0.27
Copper	5.25	7.2	37.8	1.56	6.17	9.63
Mercury	2.868	0.0958	0.27	1.136	0.0835	0.095
Nickel	2.32	9.33	21.6	0.486	8.12	3.95
Selenium	0.9	0.867	0.78	0.9	0.751	0.68
Thallium	0.9	0.712	0.64	0.9	0.614	0.55
Vanadium	2.1	20.8	43.7	0.42	18.1	7.60
Zinc	7.527	38.2	288	1.936	32.2	62.3
Harrison Bayou Watershed						
Aluminum	0.9	10300	9,270	0.9	7500	6,750
Barium	0.9	286	257	0.9	232	209
Cadmium	7.99	0.183	1.46	0.6	0.183	0.11
Copper	5.25	7.78	40.8	1.56	6.82	10.6
Mercury	2.868	0.0829	0.24	1.136	0.0613	0.070
Nickel	2.32	11	25.5	0.486	9.7	4.71
Selenium	0.9	0.908	0.82	0.9	0.765	0.69
Thallium	0.9	0.6	0.54	0.9	0.492	0.44
Vanadium	2.1	28.7	60.3	0.42	21.3	8.95
Zinc	7.527	35.8	269	1.936	31.5	61.0
Goose Prairie Creek Watershed						
Aluminum	0.9	10300	9,270	0.9	8980	8,082
Barium	0.9	134	121	0.9	118	106
Cadmium	7.99	0.524	4.19	0.6	0.484	0.29
Copper	5.25	12.7	66.7	1.56	10.8	16.8
Lead	0.607	76.6	46.5	0.071	59.7	4.24
Mercury	2.868	0.265	0.76	1.136	0.209	0.24
Nickel	2.32	13	30.2	0.486	11.3	5.49
Selenium	0.9	1.29	1.16	0.9	1.1	0.99
Silver	0.9	2.66	2.39	0.9	2.05	1.85
Thallium	0.9	2.69	2.42	0.9	1.95	1.76
Vanadium	2.1	29.4	61.7	0.42	26.5	11.1
Zinc	7.527	94.1	708	1.936	77.8	151

Table B-1
Estimation of Aquatic Worm Inorganic COPEC Concentrations for Use in Fish Hazard Evaluation, LHAAP

Sediment COPEC	Tier 1			Tier 2		
	BSAF [a]	Sediment Conc. (mg/kg)	Estimated Aq. Worm Conc. (mg/kg)	BSAF [a]	Sediment Conc. (mg/kg)	Estimated Aq. Worm Conc. (mg/kg)
Saunders Branch Watershed						
Aluminum	0.9	16300	14,670	0.9	11800	10,620
Barium	0.9	160	144	0.9	124	112
Cadmium	7.99	0.256	2.05	0.6	0.162	0.097
Copper	5.25	10.7	56.2	1.56	8.76	13.7
Manganese	2.1	488	1,025	0.42	346	145
Mercury	2.868	0.0883	0.25	1.136	0.0578	0.066
Nickel	2.32	10.1	23.4	0.486	8.62	4.19
Selenium	0.9	0.941	0.85	0.9	0.632	0.57
Vanadium	2.1	30.8	64.7	0.42	26	10.9
Zinc	7.527	51.5	388	1.936	43	83.2

Notes and Abbreviations:

Fish hazard evaluation for brown bullhead based on results of TrophicTrace model. This software model uses measured or estimated COPEC concentrations in aquatic worms to estimate concentrations in fish tissue.

The estimated aquatic worm concentrations are used in the TrophicTrace model as input for 28-day bioaccumulation study results for those COPECs that have readily available trophic transfer factors.

[a] From Table 7-20, converting dry weight BSAFs to wet weight BSAFs using a factor of 0.2, when appropriate.

BSAF biota sediment accumulation factor (sediment to aquatic worm)
COPEC constituent of potential ecological concern
LHAAP Longhorn Army Ammunition Plant
mg/kg milligram(s) per kilogram
Tier 1 Realistic worst case scenario (upperbound BSAFs, 95% UCL exposure point concentrations)
Tier 2 Average exposure scenario (average BSAFs, average exposure point concentrations)
UCL upper confidence limit

Table B-2a
Tier 1 Aquatic Hazard Estimates Based on Estimated Tissue Concentrations
Central Creek Watershed, LHAAP

COPEC [a]	Surface Water EPC [b] (mg/L)	Sediment EPC [c] (mg/kg)	Surface Water to Fish BCF [d] (unitless)	Estimated Fathead Minnow Concentration from Surface Water [d] (mg/kg wet weight)	Estimated Catfish Concentration from Sediment [e] (mg/kg wet weight)	Fish Critical Tissue Values [f] (mg/kg wet weight): Bounded NOAEL	Fish Critical Tissue Values [f] (mg/kg wet weight): Bounded LOAEL	Minnow Hazard Quotient (from Surface Water COPEC) [g] (unitless): NOAEL-Based	Minnow Hazard Quotient (from Surface Water COPEC) [g] (unitless): LOAEL-Based	Catfish Hazard Quotient (from Sediment COPEC) [g] (unitless): NOAEL-Based	Catfish Hazard Quotient (from Sediment COPEC) [g] (unitless): LOAEL-Based
Aluminum	6.11	9.69E+03	0.860	5.2546	5.63	12.8	20	0.410515625	0.26273	0.43984375	0.2815
Barium	0.14	132	201	28.168	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Cadmium	2.49E-03	0.548	326	0.81174	1.1	0.05	0.1	16.2348	8.1174	22	11
Chromium	NVA	NVA	200	NVA	NVA	2.3	8.9	NVA	NVA	NVA	NVA
Copper	0.0118	7.2	1,183	13.9594	7.94	3.92	4.48	3.561071429	3.1159375	2.025510204	1.772321429
Iron	5.98	NVA	200	1196	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Lead	5.18E-03	NVA	300	1.554	NVA	2.54	4	0.611811024	0.3885	NVA	NVA
Manganese	0.454	NVA	400	181.6	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Mercury	NVA	0.0958	3,615	NVA	0.527	0.8	1.3	NVA	NVA	0.65875	0.405384615
Nickel	NVA	9.33	100	NVA	21.6	1.18	11.81	NVA	NVA	18.30508475	1.82895851
Selenium	NVA	0.867	41	NVA	0.118	1.1	1.3	NVA	NVA	0.107272727	0.090769231
Silver	NVA	NVA	27	NVA	NVA	0.06	0.24	NVA	NVA	NVA	NVA
Strontium	NVA	NVA	210	NVA	99	NVA	NVA	NVA	NVA	NVA	NVA
Thallium	NVA	0.712	3,180	NVA	1.51	2.72	NVA	NVA	NVA	0.555147059	NVA
Vanadium	3.33E-02	20.8	214	7.11288	4.45	0.57	2.22	12.47873684	3.204	7.807017544	2.004504505
Zinc	NVA	38.2	1,000	NVA	69.1	19.3	22.6	NVA	NVA	3.580310881	3.057522124
2,3,7,8-TCDD TEQ	1.22E-08	8.26E-06	34,000	0.0004148	7.55E-05	1.25E-04	2.32E-04	3.3184	1.787931034	0.604	0.325431034
4,4'-DDD	NVA	NVA	NVA	NVA	NVA	1.92	2	NVA	NVA	NVA	NVA
4,4'-DDT	NVA	NVA	TBA	NVA	NVA	1.92	2	NVA	NVA	NVA	NVA
Acetone	NVA	0.223	3	NVA	0.123	26.6	266	NVA	NVA	0.00462406	0.000462406
Aroclor-1254	NVA	NVA	140,000	NVA	NVA	0.76	1.53	NVA	NVA	NVA	NVA
Bis(2-ethylhexyl)phthalate	NVA	NVA	310	NVA	NVA	0.66	NVA	NVA	NVA	NVA	NVA
Chloride	NVA	NVA	214	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Carbon disulfide	NVA	0.122	10	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Dieldrin	NVA	NVA	10,546	NVA	NVA	0.12	2	NVA	NVA	NVA	NVA
Isobutanol	NVA	6.10E-02	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Isopropylbenzene	NVA	5.24E-03	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Nitrate	0.867	0.13	214	185.1912	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Nitrate/Nitrite	0.0706	NVA	214	15.08016	NVA	NVA	NVA	NVA	NVA	NVA	NVA
p-Isopropyltoluene (p-cymene)	NVA	0.0138	705	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Sulfate	6.09	20	214	1300.824	NVA	NVA	NVA	NVA	NVA	NVA	NVA

Notes:

[a] COPECs identified based on results of screening assessment.

[b] EPCs represent 95% UCL for surface water samples collected in the watershed for Tier 1, or average concentration for Tier 2.

[c] EPCs represent 95% UCLs for the surface sediment samples collected in the watershed for Tier 1, or the average concentration for Tier 2.

[d] Fathead minnow concentration estimated to result from bioaccumulation from surface water to fish BCFs tissue. Water to fish, for total COPEC concentrations and for wet weight fish tissue, estimated from information provided in Table 7-22, converting dry weight BCFs to wet weight BCFs using a factor of 0.2.

[e] Catfish concentration estimated to result from bioaccumulation from sediment to fish tissue, using TrophicTrace model (Appendix B).

[f] Fish CTV selected based on results of data review presented in Appendix C.

[g] HQ estimated by dividing minnow or catfish concentration by fish CTV.

BCF bioconcentration factor
COPEC constituent of potential ecological concern
CTV critical tissue value
EPC exposure point concentration
HQ hazard quotient
LHAPP Longhorn Army Ammunition Plant
LOAEL Lowest Observed Adverse Effect Level
mg/kg milligrams per kilogram
mg/L milligrams per Liter
NOAEL No Observed Adverse Effect Level
NVA no value available due to COPEC not selected for media, value not found in literature, or value not needed due to other critical values not available.
TBA DEFINITION
UCL upper confidence limit

Table B-2b
Tier 1 Aquatic Hazard Estimates Based on Estimated Tissue Concentrations
Harrison Bayou Watershed, LHAAP

COPEC [a]	Surface Water EPC [b]	Sediment EPC [c]	Surface Water to Fish BCF [d] (unitless)	Estimated Fathead Minnow Concentration from Surface Water [d]	Estimated Catfish Concentration from Sediment [e]	Fish Critical Tissue Values [f] (mg/kg wet weight)		Minnow Hazard Quotient (from Surface Water COPEC) [g] (unitless)		Catfish Hazard Quotient (from Sediment COPEC) [g] (unitless)	
	(mg/L)	(mg/kg)		(mg/kg wet weight)		Bounded NOAEL	Bounded LOAEL	NOAEL-Based	LOAEL-Based	NOAEL-Based	LOAEL-Based
Aluminum	20.3	1.03E+04	0.860	17.458	5.99	12.8	20	1.36390625	0.8729	0.46796875	0.2995
Barium	0.258	286	201	51.9096	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Cadmium	NVA	0.183	326	NVA	0.287	0.05	0.1	NVA	NVA	5.74	2.87
Chromium	0.0127	NVA	200	2.54	NVA	2.3	8.9	1.104347826	0.285393258	NVA	NVA
Copper	0.0169	7.78	1,183	19.9927	8.57	3.92	4.48	5.100178571	4.46265625	2.18622449	1.912946429
Iron	29.1	NVA	200	5820	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Lead	7.24E-03	NVA	300	2.172	NVA	2.54	4	0.85511811	0.543	NVA	NVA
Manganese	0.79	NVA	400	316	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Mercury	NVA	0.0829	3,615	NVA	0.468	0.8	1.3	NVA	NVA	0.585	0.36
Nickel	NVA	11	100	NVA	25.5	1.18	11.81	NVA	NVA	21.61016949	2.15918713
Selenium	4.63E-03	0.908	41	0.18983	0.123	1.1	1.3	0.172572727	0.146023077	0.111818182	0.094615385
Silver	NVA	NVA	27	NVA	NVA	0.06	0.24	NVA	NVA	NVA	NVA
Strontium	NVA	NVA	210	NVA	99	NVA	NVA	NVA	NVA	NVA	NVA
Thallium	7.55E-04	0.6	3,180	2.4009	1.27	2.72	NVA	0.882683824	NVA	0.466911765	NVA
Vanadium	0.0618	28.7	214	13.20048	6.14	0.57	2.22	23.15873684	5.946162162	10.77192982	2.765765766
Zinc	NVA	35.8	1,000	NVA	64.6	19.3	22.6	NVA	NVA	3.347150259	2.85840708
2,3,7,8-TCDD TEQ	9.44E-09	1.41E-05	34,000	0.00032096	7.06E-05	1.25E-04	2.32E-04	2.56768	1.383448276	0.5648	0.304310345
4,4'-DDD	NVA	NVA	NVA	NVA	NVA	1.92	2	NVA	NVA	NVA	NVA
4,4'-DDT	NVA	NVA	TBA	NVA	NVA	1.92	2	NVA	NVA	NVA	NVA
Acetone	NVA	0.0349	3	NVA	0.0106	26.6	266	NVA	NVA	0.000398496	3.98496E-05
Aroclor-1254	NVA	NVA	140,000	NVA	NVA	0.76	1.53	NVA	NVA	NVA	NVA
Bis(2-ethylhexyl)phthalate	NVA	0.282	310	NVA	0.339	0.66	NVA	NVA	NVA	0.513636364	NVA
Chloride	NVA	NVA	214	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Carbon disulfide	NVA	NVA	10	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Dieldrin	NVA	NVA	10,546	NVA	NVA	0.12	2	NVA	NVA	NVA	NVA
Isobutanol	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Isopropylbenzene	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Nitrate	0.746	0.748	214	159.3456	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Nitrate/Nitrite	58.4	NVA	214	12474.24	NVA	NVA	NVA	NVA	NVA	NVA	NVA
p-Isopropyltoluene (p-cymene)	NVA	NVA	705	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Sulfate	57.6	75.1	214	12303.36	NVA	NVA	NVA	NVA	NVA	NVA	NVA

Notes:

[a] COPECs identified based on results of screening assessment.

[b] EPCs represent 95% UCL for surface water samples collected in the watershed for Tier 1, or average concentration for Tier 2.

[c] EPCs represent 95% UCLs for the surface sediment samples collected in the watershed for Tier 1, or the average concentration for Tier 2.

[d] Fathead minnow concentration estimated to result from bioaccumulation from surface water to fish tissue. Water to fish BCFs, for total COPEC concentrations and for wet weight fish tissue, estimated from information provided in Table 7-22, converting dry weight BCFs to wet weight BCFs using a factor of 0.2.

[e] Catfish concentration estimated to result from bioaccumulation from sediment to fish tissue, using TrophicTrace model (Appendix B).

[f] Fish CTV selected based on results of data review presented in Appendix C.

[g] HQ estimated by dividing minnow or catfish concentration by fish CTV.

BCF bioconcentration factor
COPEC constituent of potential ecological concern
CTV critical tissue value
EPC exposure point concentration
HQ hazard quotient
LHAAP Longhorn Army Ammunition Plant
LOAEL Lowest Observed Adverse Effect Level
mg/kg milligrams per kilogram
mg/L milligrams per Liter
NOAEL No Observed Adverse Effect Level
NVA no value available due to COPEC not selected for media, value not found in literature, or value not needed due to other critical values not available.
TBA DEFINITION
UCL upper confidence limit

Table B-2c
Tier 1 Aquatic Hazard Estimates Based on Estimated Tissue Concentrations
Goose Prairie Creek Watershed, LHAAP

COPEC [a]	Surface Water EPC [b] (mg/L)	Sediment EPC [c] (mg/kg)	Surface Water to Fish BCF [d] (unitless)	Estimated Fathead Minnow Concentration from Surface Water [d] (mg/kg wet weight)	Estimated Catfish Concentration from Sediment [e] (mg/kg wet weight)	Fish Critical Tissue Values [f] (mg/kg wet weight) Bounded NOAEL	Bounded LOAEL	Minnow Hazard Quotient (from Surface Water COPEC) [g] (unitless) NOAEL-Based	LOAEL-Based	Catfish Hazard Quotient (from Sediment COPEC) [g] (unitless) NOAEL-Based	LOAEL-Based
Aluminum	2.1	1.03E+04	0.860	1.806	5.99	12.8	20	0.14109375	0.0903	0.46796875	0.2995
Barium	0.181	134	201	36.4172	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Cadmium	NVA	0.524	326	NVA	1.05	0.05	0.1	NVA	NVA	21	10.5
Chromium	NVA	NVA	200	NVA	NVA	2.3	8.9	NVA	NVA	NVA	NVA
Copper	1.42E-02	12.7	1,183	16.7986	14	3.92	4.48	4.285357143	3.7496875	3.571428571	3.125
Iron	3.14	NVA	200	628	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Lead	7.76E-03	76.6	300	2.328	10.7	2.54	4	0.916535433	0.582	4.212598425	2.675
Manganese	0.273	NVA	400	109.2	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Mercury	NVA	0.265	3,615	NVA	1.48	0.8	1.3	NVA	NVA	1.85	1.138461538
Nickel	NVA	13	100	NVA	30.2	1.18	11.81	NVA	NVA	25.59322034	2.557154953
Selenium	3.74E-03	1.29	41	0.15334	0.175	1.1	1.3	0.1394	0.117953846	0.159090909	0.134615385
Silver	NVA	2.66	27	NVA	2.39	0.06	0.24	NVA	NVA	39.83333333	9.958333333
Strontium	NVA	NVA	210	NVA	99	NVA	NVA	NVA	NVA	NVA	NVA
Thallium	1.17E-03	0.702	3,180	3.7206	0.26	2.72	NVA	1.367867647	NVA	0.095588235	NVA
Vanadium	NVA	29.4	214	NVA	6.29	0.57	2.22	NVA	NVA	11.03508772	2.833333333
Zinc	8.78E-02	94.1	1,000	87.8	170	19.3	22.6	4.549222798	3.884955752	8.808290155	7.522123894
2,3,7,8-TCDD TEQ	8.59E-09	1.59E-06	34,000	0.00029206	4.58E-06	1.25E-04	2.32E-04	2.33648	1.25887931	0.03664	0.019741379
4,4'-DDD	NVA	2.97E-03	NVA	NVA	2.49E-04	1.92	2	NVA	NVA	0.000129688	0.0001245
4,4'-DDT	NVA	3.04E-03	TBA	NVA	5.59E-04	1.92	2	NVA	NVA	0.000291146	0.0002795
Acetone	NVA	0.143	3	NVA	0.0249	26.6	266	NVA	NVA	0.00093609	9.3609E-05
Aroclor-1254	NVA	0.051	140,000	NVA	0.145	0.76	1.53	NVA	NVA	0.190789474	0.094771242
Bis(2-ethylhexyl)phthalate	2.43E-02	NVA	310	7.533	NVA	0.66	NVA	11.41363636	NVA	NVA	NVA
Chloride	NVA	NVA	214	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Carbon disulfide	NVA	9.88E-03	10	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Dieldrin	NVA	3.00E-03	10,546	NVA	1.31E-03	0.12	2	NVA	NVA	0.010916667	0.000655
Isobutanol	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Isopropylbenzene	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Nitrate	0.886	NVA	214	189.2496	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Nitrate/Nitrite	0.0812	NVA	214	17.34432	NVA	NVA	NVA	NVA	NVA	NVA	NVA
p-Isopropyltoluene (p-cymene)	NVA	5.71E-03	705	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Sulfate	14.2	6.05	214	3033.12	NVA	NVA	NVA	NVA	NVA	NVA	NVA

Notes:

[a] COPECs identified based on results of screening assessment.

[b] EPCs represent 95% UCL for surface water samples collected in the watershed for Tier 1, or average concentration for Tier 2.

[c] EPCs represent 95% UCLs for the surface sediment samples collected in the watershed for Tier 1, or the average concentration for Tier 2.

[d] Fathead minnow concentration estimated to result from bioaccumulation from surface water to fish tissue. Water to fish BCFs, for total COPEC concentrations and for wet weight fish tissue, estimated from information provided in Table 7-22, converting dry weight BCFs to wet weight BCFs using a factor of 0.2.

[e] Catfish concentration estimated to result from bioaccumulation from sediment to fish tissue, using TrophicTrace model (Appendix B).

[f] Fish CTV selected based on results of data review presented in Appendix C.

[g] HQ estimated by dividing minnow or catfish concentration by fish CTV.

BCF bioconcentration factor
COPEC constituent of potential ecological concern
CTV critical tissue value
EPC exposure point concentration
HQ hazard quotient
LHAAP Longhorn Army Ammunition Plant
LOAEL Lowest Observed Adverse Effect Level
mg/kg milligrams per kilogram
mg/L milligrams per Liter
NOAEL No Observed Adverse Effect Level
NVA no value available due to COPEC not selected for media, value not found in literature, or value not needed due to other critical values not available.
TBA DEFINITION
UCL upper confidence limit

Table B-2d
Tier 1 Aquatic Hazard Estimates Based on Estimated Tissue Concentrations
Saunders Branch Watershed, LHAAP

COPEC [a]	Surface Water EPC [b] (mg/L)	Sediment EPC [c] (mg/kg)	Surface Water to Fish BCF [d] (unitless)	Estimated Fathead Minnow Concentration from Surface Water [d] (mg/kg wet weight)	Estimated Catfish Concentration from Sediment [e] (mg/kg wet weight)	Fish Critical Tissue Values [f] (mg/kg wet weight) Bounded NOAEL	Bounded LOAEL	Minnow Hazard Quotient (from Surface Water COPEC) [g] (unitless) NOAEL-Based	LOAEL-Based	Catfish Hazard Quotient (from Sediment COPEC) [g] (unitless) NOAEL-Based	LOAEL-Based
Aluminum	NVA	1.63E+04	0.860	NVA	9.47	12.8	20	NVA	NVA	0.73984375	0.4735
Barium	0.261	160	201	52.5132	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Cadmium	NVA	0.214	326	NVA	0.429	0.05	0.1	NVA	NVA	8.58	4.29
Chromium	NVA	NVA	200	NVA	NVA	2.3	8.9	NVA	NVA	NVA	NVA
Copper	NVA	10.7	1,183	NVA	11.8	3.92	4.48	NVA	NVA	3.01020408	2.633928571
Iron	NVA	NVA	200	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Lead	3.00E-03	NVA	300	0.9	NVA	2.54	4	0.354330709	0.225	NVA	NVA
Manganese	NVA	488	400	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Mercury	NVA	8.01E-02	3,615	NVA	0.443	0.8	1.3	NVA	NVA	0.55375	0.340769231
Nickel	NVA	11	100	NVA	23.4	1.18	11.81	NVA	NVA	19.8305085	1.981371719
Selenium	NVA	0.874	41	NVA	0.119	1.1	1.3	NVA	NVA	0.10818182	0.091538462
Silver	NVA	NVA	27	NVA	NVA	0.06	0.24	NVA	NVA	NVA	NVA
Strontium	NVA	NVA	210	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Thallium	NVA	NVA	3,180	NVA	NVA	2.72	NVA	NVA	NVA	NVA	NVA
Vanadium	NVA	30.8	214	NVA	6.59	0.57	2.22	NVA	NVA	11.5614035	2.968468468
Zinc	NVA	51.5	1,000	NVA	93.1	19.3	22.6	NVA	NVA	4.8238342	4.119469027
2,3,7,8-TCDD TEQ	NVA	6.98E-06	34,000	NVA	5.00E-05	1.25E-04	2.32E-04	NVA	NVA	0.4	0.215517241
4,4'-DDD	NVA	NVA	NVA	NVA	NVA	1.92	2	NVA	NVA	NVA	NVA
4,4'-DDT	NVA	NVA	TBA	NVA	NVA	1.92	2	NVA	NVA	NVA	NVA
Acetone	NVA	0.283	3	NVA	0.123	26.6	266	NVA	NVA	0.00462406	0.000462406
Aroclor-1254	NVA	NVA	140,000	NVA	NVA	0.76	1.53	NVA	NVA	NVA	NVA
Bis(2-ethylhexyl)phthalate	NVA	0.306	310	NVA	0.526	0.66	NVA	NVA	NVA	0.7969697	NVA
Chloride	NVA	39.7	214	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Carbon disulfide	NVA	2.95E-02	10	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Dieldrin	NVA	NVA	10,546	NVA	NVA	0.12	2	NVA	NVA	NVA	NVA
Isobutanol	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Isopropylbenzene	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Nitrate	9.00E-02	0.988	214	19.224	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Nitrate/Nitrite	NVA	NVA	214	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA
p-Isopropyltoluene (p-cymene)	NVA	NVA	705	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Sulfate	5	30	214	1068	NVA	NVA	NVA	NVA	NVA	NVA	NVA

Notes:

[a] COPECs identified based on results of screening assessment.

[b] EPCs represent 95% UCLs for surface water samples collected in the watershed for Tier 1, or average concentration for Tier 2.

[c] EPCs represent 95% UCLs for the surface sediment samples collected in the watershed for Tier 1, or the average concentration for Tier 2.

[d] Fathead minnow concentration estimated to result from bioaccumulation from surface water to fish tissue. Water to fish BCFs, for total COPEC concentrations and for wet weight fish tissue, estimated from information provided in Table 7-22, converting dry weight BCFs to wet weight BCFs using a factor of 0.2.

[e] Catfish concentration estimated to result from bioaccumulation from sediment to fish tissue, using TrophicTrace model (Appendix B).

[f] Fish CTV selected based on results of data review presented in Appendix C.

[g] HQ estimated by dividing minnow or catfish concentration by fish CTV.

BCF bioconcentration factor
COPEC constituent of potential ecological concern
CTV critical tissue value
EPC exposure point concentration
HQ hazard quotient
LHAAP Longhorn Army Ammunition Plant
LOAEL Lowest Observed Adverse Effect Level
mg/kg milligrams per kilogram
mg/L milligrams per Liter
NOAEL No Observed Adverse Effect Level
NVA no value available due to COPEC not selected for media, value not found in literature, or value not needed due to other critical values not available.
TBA DEFINITION
UCL upper confidence limit

Table B-2e
Tier 2 Aquatic Hazard Estimates Based on Estimated Tissue Concentrations
Central Creek Watershed, LHAAP

COPEC [a]	Surface Water EPC [b] (mg/L)	Sediment EPC [c] (mg/kg)	Surface Water to Fish BCF [d] (unitless)	Fathead Minnow Concentration from Surface Water [d] (mg/kg wet weight)	Estimated Catfish Concentration from Sediment [e] (mg/kg wet weight)	Fish Critical Tissue Values [f] (mg/kg wet weight) Bounded NOAEL	Bounded LOAEL	Minnow Hazard Quotient (from Surface Water COPEC) [g] (unitless) NOAEL-Based	LOAEL-Based	Catfish Hazard Quotient (from Sediment COPEC) [g] (unitless) NOAEL-Based	LOAEL-Based
Aluminum	4.16	8.09E+03	0.86	3.5776	4.7	12.8	20	0.2795	0.17888	0.3671875	0.235
Barium	0.124	118	4.00	0.496	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Cadmium	2.09E-03	0.457	229.6	0.479864	0.0675	0.05	0.1	9.59728	4.79864	1.35	0.675
Chromium	NVA	NVA	72	NVA	NVA	2.3	8.9	NVA	NVA	NVA	NVA
Copper	9.31E-03	6.17	222	2.068682	2.02	3.92	4.48	0.527725	0.461759375	0.515306122	0.450892857
Iron	4.18	NVA	50	209	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Lead	4.09E-03	NVA	89.6	0.366464	NVA	2.54	4	0.144277165	0.091616	NVA	NVA
Manganese	0.317	NVA	50	15.85	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Mercury	NVA	8.35E-02	550	NVA	0.185	0.8	1.3	NVA	NVA	0.23125	0.142307692
Nickel	NVA	8.12	41.8	NVA	3.95	1.18	11.81	NVA	NVA	3.347457627	0.33446232
Selenium	NVA	0.751	41	NVA	0.102	1.1	1.3	NVA	NVA	0.092727273	0.078461538
Silver	NVA	NVA	5	NVA	NVA	0.06	0.24	NVA	NVA	NVA	NVA
Strontium	NVA	NVA	58.2	NVA	99	NVA	NVA	NVA	NVA	NVA	NVA
Thallium	NVA	0.614	15.0	NVA	6.14E-03	2.72	NVA	NVA	NVA	0.002257353	NVA
Vanadium	2.64E-02	18.1	60.2	1.58928	1.09	0.57	2.22	2.788210526	0.715891892	1.912280702	0.490990991
Zinc	NVA	32.2	582.2	NVA	15	19.3	22.6	NVA	NVA	0.777202073	0.663716814
			0								
2,3,7,8-TCDD TEQ	1.07E-08	6.00E-06	4,617	4.94019E-05	7.71E-06	1.25E-04	2.32E-04	0.3952152	0.212939224	0.06168	0.033232759
4,4'-DDD	NVA	NVA	8600	NVA	NVA	1.92	2	NVA	NVA	NVA	NVA
4,4'-DDT	NVA	NVA	9549	NVA	NVA	1.92	2	NVA	NVA	NVA	NVA
Acetone	NVA	0.162	0.1	NVA	0.0585	26.6	266	NVA	NVA	0.002199248	0.000219925
Aroclor-1254	NVA	NVA	42,081	NVA	NVA	0.76	1.53	NVA	NVA	NVA	NVA
Bis(2-ethylhexyl)phthalate	NVA	NVA	143	NVA	NVA	0.66	NVA	NVA	NVA	NVA	NVA
Chloride	NVA	NVA	60.2	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Carbon disulfide	NVA	9.48E-03	6.2	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Dieldrin	NVA	NVA	2,000	NVA	NVA	0.12	2	NVA	NVA	NVA	NVA
Isobutanol	NVA	0.061	0.8	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Isopropylbenzene	NVA	4.20E-03	130	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Nitrate	0.479	0.095	60.2	28.8358	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Nitrate/Nitrite	5.55E-02	NVA	60.2	3.3411	NVA	NVA	NVA	NVA	NVA	NVA	NVA
p-Isopropyltoluene (p-cymene)	NVA	8.80E-03	705	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Sulfate	5.14	13.9	60.2	309.428	NVA	NVA	NVA	NVA	NVA	NVA	NVA

Notes:

[a] COPECs identified based on results of screening assessment

[b] EPCs represent 95% UCL for surface water samples collected in the watershed for Tier 1, or average concentration for Tier 2

[c] EPCs represent 95% UCLs for the surface sediment samples collected in the watershed for Tier 1, or the average concentration for Tier 2

[d] Fathead minnow concentration estimated to result from bioaccumulation from surface water to fish tissue. Water to fish BCFs, for total COPEC concentrations and for wet weight fi
tissue, estimated from information provided in Table 7-22, converting dry weight BCFs to wet weight BCFs using a factor of 0.2.

[e] Catfish concentration estimated to result from bioaccumulation from sediment to fish tissue, using TrophicTrace model (Appendix B

[f] Fish CTV selected based on results of data review presented in Appendix C

[g] HQ estimated by dividing minnow or catfish concentration by fish CTV

BCF bioconcentration factor
COPEC constituent of potential ecological concern
CTV critical tissue value
EPC exposure point concentration
HQ hazard quotient
LHAAP Longhorn Army Ammunition Plant
LOAEL Lowest Observed Adverse Effect Level
mg/kg milligrams per kilogram
mg/L milligrams per Liter
NOAEL No Observed Adverse Effect Level
NVA no value available due to COPEC not selected for media, value not found in literature, or value not needed due to other critical values not available.
UCL upper confidence limit

Table B-2f
Tier 2 Aquatic Hazard Estimates Based on Estimated Tissue Concentrations
Harrison Bayou Watershed, LHAAP

COPEC [a]	Surface Water EPC [b] (mg/L)	Sediment EPC [c] (mg/kg)	Surface Water to Fish BCF [d] (unitless)	Fathead Minnow Concentration from Surface Water [d] (mg/kg wet weight)	Estimated Catfish Concentration from Sediment [e] (mg/kg wet weight)	Fish Critical Tissue Values [f] (mg/kg wet weight): Bounded NOAEL	Fish Critical Tissue Values [f] (mg/kg wet weight): Bounded LOAEL	Minnow Hazard Quotient (from Surface Water COPEC) [g] (unitless): NOAEL-Based	Minnow Hazard Quotient (from Surface Water COPEC) [g] (unitless): LOAEL-Based	Catfish Hazard Quotient (from Sediment COPEC) [g] (unitless): NOAEL-Based	Catfish Hazard Quotient (from Sediment COPEC) [g] (unitless): LOAEL-Based
Aluminum	11.2	7.50E+03	0.86	9.632	4.36	12.8	20	0.7525	0.4816	0.340625	0.218
Barium	0.209	232	4.00	0.836	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Cadmium	NVA	0.183	229.6	NVA	0.0275	0.05	0.1	NVA	NVA	0.55	0.275
Chromium	9.95E-03	NVA	72	0.7164	NVA	2.3	8.9	0.311478261	0.080494382	NVA	NVA
Copper	1.19E-02	6.82	222	2.64418	2.23	3.92	4.48	0.674535714	0.59021875	0.568877551	0.497767857
Iron	16.1	NVA	50	805	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Lead	5.66E-03	NVA	89.6	0.507136	NVA	2.54	4	0.199659843	0.126784	NVA	NVA
Manganese	0.692	NVA	50	34.6	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Mercury	NVA	0.0613	550	NVA	0.137	0.8	1.3	NVA	NVA	0.17125	0.105384615
Nickel	NVA	9.7	41.8	NVA	4.71	1.18	11.81	NVA	NVA	3.991525424	0.398814564
Selenium	3.90E-03	0.765	41	0.1599	0.104	1.1	1.3	0.145363636	0.123	0.094545455	0.08
Silver	NVA	NVA	5	NVA	NVA	0.06	0.24	NVA	NVA	NVA	NVA
Strontium	NVA	NVA	58.2	NVA	99	NVA	NVA	NVA	NVA	NVA	NVA
Thallium	5.86E-04	0.492	15.0	0.00879	4.92E-03	2.72	NVA	0.003231618	NVA	0.001808824	NVA
Vanadium	4.29E-02	21.3	60.2	2.58258	1.28	0.57	2.22	4.530842105	1.163324324	2.245614035	0.576576577
Zinc	NVA	31.5	582.2	NVA	14.6	19.3	22.6	NVA	NVA	0.756476684	0.646017699
2,3,7,8-TCDD TEQ	8.00E-09	4.00E-06	4,617	0.000036936	2.70E-06	1.25E-04	2.32E-04	0.295488	0.159206897	0.0216	0.011637931
4,4'-DDD	NVA	NVA	8600	NVA	NVA	1.92	2	NVA	NVA	NVA	NVA
4,4'-DDT	NVA	NVA	9549	NVA	NVA	1.92	2	NVA	NVA	NVA	NVA
Acetone	NVA	0.0283	0.1	NVA	5.37E-03	26.6	266	NVA	NVA	0.00020188	2.0188E-05
Aroclor-1254	NVA	NVA	42,081	NVA	NVA	0.76	1.53	NVA	NVA	NVA	NVA
Bis(2-ethylhexyl)phthalate	NVA	0.233	143	NVA	0.0376	0.66	NVA	NVA	NVA	0.056969697	NVA
Chloride	NVA	NVA	60.2	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Carbon disulfide	NVA	NVA	6.2	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Dieldrin	NVA	NVA	2,000	NVA	NVA	0.12	2	NVA	NVA	NVA	NVA
Isobutanol	NVA	NVA	0.8	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Isopropylbenzene	NVA	NVA	130	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Nitrate	0.432	0.46	60.2	26.0064	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Nitrate/Nitrite	29.3	NVA	60.2	1763.86	NVA	NVA	NVA	NVA	NVA	NVA	NVA
p-Isopropyltoluene (p-cymene)	NVA	NVA	705	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Sulfate	41.5	51.3	60.2	2498.3	NVA	NVA	NVA	NVA	NVA	NVA	NVA

Notes:

[a] COPECs identified based on results of screening assessment.

[b] EPCs represent 95% UCLs for surface water samples collected in the watershed for Tier 1, or average concentration for Tier 2.

[c] EPCs represent 95% UCLs for the surface sediment samples collected in the watershed for Tier 1, or the average concentration for Tier 2.

[d] Fathead minnow concentration estimated to result from bioaccumulation from surface water to fish tissue. Water to fish BCFs, for total COPEC concentrations and for wet weight fish tissue, estimated from information provided in Table 7-22, converting dry weight BCFs to wet weight BCFs using a factor of 0.2.

[e] Catfish concentration estimated to result from bioaccumulation from sediment to fish tissue, using TrophicTrace model (Appendix B).

[f] Fish CTV selected based on results of data review presented in Appendix C.

[g] HQ estimated by dividing minnow or catfish concentration by fish CTV.

BCF bioconcentration factor
COPEC constituent of potential ecological concern
CTV critical tissue value
EPC exposure point concentration
HQ hazard quotient
LHAPP Longhorn Army Ammunition Plant
LOAEL Lowest Observed Adverse Effect Level
mg/kg milligrams per kilogram
mg/L milligrams per Liter
NOAEL No Observed Adverse Effect Level
NVA no value available due to COPEC not selected for media, value not found in literature, or value not needed due to other critical values not available.
UCL upper confidence limit

Table B-2g
Tier 2 Aquatic Hazard Estimates Based on Estimated Tissue Concentrations
Goose Prairie Creek Watershed, LHAAP

COPEC [a]	Surface Water EPC [b] (mg/L)	Sediment EPC [c] (mg/kg)	Surface Water to Fish BCF [d] (unitless)	Fathead Minnow Concentration from Surface Water [d] (mg/kg wet weight)	Estimated Catfish Concentration from Sediment [e] (mg/kg wet weight)	Fish Critical Tissue Values [f] (mg/kg wet weight): Bounded NOAEL	Fish Critical Tissue Values [f] (mg/kg wet weight): Bounded LOAEL	Minnow Hazard Quotient (from Surface Water COPEC) [g] (unitless): NOAEL-Based	Minnow Hazard Quotient (from Surface Water COPEC) [g] (unitless): LOAEL-Based	Catfish Hazard Quotient (from Sediment COPEC) [g] (unitless): NOAEL-Based	Catfish Hazard Quotient (from Sediment COPEC) [g] (unitless): LOAEL-Based
Aluminum	1.73	8.98E+03	0.86	1.4878	5.22	12.8	20	0.116234375	0.07439	0.4078125	0.261
Barium	0.138	118	4.00	0.552	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Cadmium	NVA	0.484	229.6	NVA	0.0725	0.05	0.1	NVA	NVA	1.45	0.725
Chromium	NVA	NVA	72	NVA	NVA	2.3	8.9	NVA	NVA	NVA	NVA
Copper	1.23E-02	10.8	222	2.73306	3.53	3.92	4.48	0.697209184	0.610058036	0.900510204	0.787946429
Iron	2.68	NVA	50	134	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Lead	6.26E-03	59.7	89.6	0.560896	0.975	2.54	4	0.220825197	0.140224	0.383858268	0.24375
Manganese	0.212	NVA	50	10.6	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Mercury	NVA	0.209	550	NVA	0.468	0.8	1.3	NVA	NVA	0.585	0.36
Nickel	NVA	11.3	41.8	NVA	5.49	1.18	11.81	NVA	NVA	4.652542373	0.464860288
Selenium	3.23E-03	1.1	41	0.13243	0.149	1.1	1.3	0.120390909	0.101869231	0.135454545	0.114615385
Silver	NVA	2.05	5	NVA	1.85	0.06	0.24	NVA	NVA	30.83333333	7.708333333
Strontium	NVA	NVA	58.2	NVA	99	NVA	NVA	NVA	NVA	NVA	NVA
Thallium	1.00E-03	0.622	15.0	0.015	0.0062	2.72	NVA	0.005514706	NVA	0.002279412	NVA
Vanadium	NVA	26.5	60.2	NVA	1.59	0.57	2.22	NVA	NVA	2.789473684	0.716216216
Zinc	6.50E-02	77.8	582.2	37.843	36.2	19.3	22.6	1.960777202	1.674469027	1.875647668	1.601769912
			0								
2,3,7,8-TCDD TEQ	7.00E-09	1.00E-06	4,617	0.000032319	3.50E-07	1.25E-04	2.32E-04	0.258552	0.139306034	0.0028	0.001508621
4,4'-DDD	NVA	2.56E-03	8600	NVA	1.22E-04	1.92	2	NVA	NVA	6.35417E-05	0.000061
4,4'-DDT	NVA	2.61E-03	9549	NVA	2.72E-04	1.92	2	NVA	NVA	0.000141667	0.000136
Acetone	NVA	0.107	0.1	NVA	0.0105	26.6	266	NVA	NVA	0.000394737	3.94737E-05
Aroclor-1254	NVA	4.20E-02	42,081	NVA	0.0145	0.76	1.53	NVA	NVA	0.019078947	0.009477124
Bis(2-ethylhexyl)phthalate	1.43E-02	NVA	143	2.0449	NVA	0.66	NVA	3.098333333	NVA	NVA	NVA
Chloride	NVA	NVA	60.2	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Carbon disulfide	NVA	7.93E-03	6.2	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Dieldrin	NVA	2.57E-03	2,000	NVA	6.34E-04	0.12	2	NVA	NVA	0.005283333	0.000317
Isobutanol	NVA	NVA	0.8	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Isopropylbenzene	NVA	NVA	130	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Nitrate	0.47	NVA	60.2	28.294	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Nitrate/Nitrite	6.18E-02	NVA	60.2	3.72036	NVA	NVA	NVA	NVA	NVA	NVA	NVA
p-Isopropyltoluene (p-cymene)	NVA	4.59E-03	705	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Sulfate	11	4.59	60.2	662.2	NVA	NVA	NVA	NVA	NVA	NVA	NVA

Notes:

[a] COPECs identified based on results of screening assessment.

[b] EPCs represent 95% UCLs for surface water samples collected in the watershed for Tier 1, or average concentration for Tier 2.

[c] EPCs represent 95% UCLs for the surface sediment samples collected in the watershed for Tier 1, or the average concentration for Tier 2.

[d] Fathead minnow concentration estimated to result from bioaccumulation from surface water to fish tissue. Water to fish BCFs, for total COPEC concentrations and for wet weight fish tissue, estimated from information provided in Table 7-22, converting dry weight BCFs to wet weight BCFs using a factor of 0.2.

[e] Catfish concentration estimated to result from bioaccumulation from sediment to fish tissue, using TrophicTrace model (Appendix B).

[f] Fish CTV selected based on results of data review presented in Appendix C.

[g] HQ estimated by dividing minnow or catfish concentration by fish CTV.

BCF bioconcentration factor
COPEC constituent of potential ecological concern
CTV critical tissue value
EPC exposure point concentration
HQ hazard quotient
LHAAP Longhorn Army Ammunition Plant
LOAEL Lowest Observed Adverse Effect Level
mg/kg milligrams per kilogram
mg/L milligrams per Liter
NOAEL No Observed Adverse Effect Level
NVA no value available due to COPEC not selected for media, value not found in literature, or value not needed due to other critical values not available.
UCL upper confidence limit

Table B-2h
Tier 2 Aquatic Hazard Estimates Based on Estimated Tissue Concentrations
Saunders Branch Watershed, LHAAP

COPEC [a]	Surface Water EPC [b] (mg/L)	Sediment EPC [c] (mg/kg)	Surface Water to Fish BCF [d] (unitless)	Fathead Minnow Concentration from Surface Water [d] (mg/kg wet weight)	Estimated Catfish Concentration from Sediment [e] (mg/kg wet weight)	Fish Critical Tissue Values [f] (mg/kg wet weight) Bounded NOAEL	Bounded LOAEL	Minnow Hazard Quotient (from Surface Water COPEC) [g] (unitless) NOAEL-Based	LOAEL-Based	Catfish Hazard Quotient (from Sediment COPEC) [g] (unitless) NOAEL-Based	LOAEL-Based
Aluminum	NVA	1.18E+04	0.86	NVA	6.86	12.8	20	NVA	NVA	0.5359375	0.343
Barium	0.184	124	4.00	0.736	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Cadmium	NVA	0.162	229.6	NVA	0.0243	0.05	0.1	NVA	NVA	0.486	0.243
Chromium	NVA	NVA	72	NVA	NVA	2.3	8.9	NVA	NVA	NVA	NVA
Copper	NVA	8.76	222	NVA	2.88	3.92	4.48	NVA	NVA	0.734693878	0.642857143
Iron	NVA	NVA	50	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Lead	2.00E-03	NVA	89.6	0.1792	NVA	2.54	4	0.070551181	0.0448	NVA	NVA
Manganese	NVA	346	50	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Mercury	NVA	5.78E-02	550	NVA	0.129	0.8	1.3	NVA	NVA	0.16125	0.099230769
Nickel	NVA	8.62	41.8	NVA	4.19	1.18	11.81	NVA	NVA	3.550847458	0.354784081
Selenium	NVA	0.632	41	NVA	0.0858	1.1	1.3	NVA	NVA	0.078	0.066
Silver	NVA	NVA	5	NVA	NVA	0.06	0.24	NVA	NVA	NVA	NVA
Strontium	NVA	NVA	58.2	NVA	99	NVA	NVA	NVA	NVA	NVA	NVA
Thallium	NVA	NVA	15.0	NVA	NVA	2.72	NVA	NVA	NVA	NVA	NVA
Vanadium	NVA	26	60.2	NVA	1.56	0.57	2.22	NVA	NVA	2.736842105	0.702702703
Zinc	NVA	43	582.2	NVA	20	19.3	22.6	NVA	NVA	1.03626943	0.884955752
			0								
2,3,7,8-TCDD TEQ	NVA	6.98E-06	4,617	NVA	8.83E-06	1.25E-04	2.32E-04	NVA	NVA	0.07064	0.038060345
4,4'-DDD	NVA	NVA	8600	NVA	NVA	1.92	2	NVA	NVA	NVA	NVA
4,4'-DDT	NVA	NVA	9549	NVA	NVA	1.92	2	NVA	NVA	NVA	NVA
Acetone	NVA	0.189	0.1	NVA	6.71E-02	26.6	266	NVA	NVA	0.002522556	0.000252256
Aroclor-1254	NVA	NVA	42,081	NVA	NVA	0.76	1.53	NVA	NVA	NVA	NVA
Bis(2-ethylhexyl)phthalate	NVA	0.227	143	NVA	0.0686	0.66	NVA	NVA	NVA	0.103939394	NVA
Chloride	NVA	25.5	60.2	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Carbon disulfide	NVA	1.71E-02	6.2	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Dieldrin	NVA	NVA	2,000	NVA	NVA	0.12	2	NVA	NVA	NVA	NVA
Isobutanol	NVA	NVA	0.8	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Isopropylbenzene	NVA	NVA	130	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Nitrate	3.25E-02	0.595	60.2	1.9565	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Nitrate/Nitrite	NVA	NVA	60.2	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA
p-Isopropyltoluene (p-cymene)	NVA	NVA	705	NVA	NVA	NVA	NVA	NVA	NVA	NVA	NVA
Sulfate	2.88	25.8	60.2	173.376	NVA	NVA	NVA	NVA	NVA	NVA	NVA

Notes:

[a] COPECs identified based on results of screening assessment.

[b] EPCs represent 95% UCLs for surface water samples collected in the watershed for Tier 1, or average concentration for Tier 2.

[c] EPCs represent 95% UCLs for the surface sediment samples collected in the watershed for Tier 1, or the average concentration for Tier 2.

[d] Fathead minnow concentration estimated to result from bioaccumulation from surface water to fish tissue. Water to fish BCFs, for total COPEC concentrations and for wet weight fish tissue, estimated from information provided in Table 7-22, converting dry weight BCFs to wet weight BCFs using a factor of 0.2.

[e] Catfish concentration estimated to result from bioaccumulation from sediment to fish tissue, using TrophicTrace model (Appendix B).

[f] Fish CTV selected based on results of data review presented in Appendix C.

[g] HQ estimated by dividing minnow or catfish concentration by fish CTV.

BCF bioconcentration factor
COPEC constituent of potential ecological concern
CTV critical tissue value
EPC exposure point concentration
HQ hazard quotient
LHAAP Longhorn Army Ammunition Plant
LOAEL Lowest Observed Adverse Effect Level
mg/kg milligrams per kilogram
mg/L milligrams per Liter
NOAEL No Observed Adverse Effect Level
NVA no value available due to COPEC not selected for media, value not found in literature, or value not needed due to other critical values not available.
UCL upper confidence limit

Attachment 1

TrophicTrace® Model Output

Correction Factor Table for Sediment EPCs

Site	Medium	Units	Constituent	Revised 95% UCL (Bootstrap)	Original 95% UCL (Bootstrap)	Correction Factor	Revised Arithmetic Mean	Original Arithmetic Mean	Correction Factor
GPC	SED	mg/kg	Thallium	7.02E-01	2.69E+00	0.26	6.22E-01	1.95E+00	0.32
SB	SED	mg/kg	Cadmium	2.14E-01	2.56E-01	0.83	no change	1.62E-01	N/A
SB	SED	mg/kg	Selenium	8.74E-01	9.41E-01	0.93	no change	6.32E-01	N/A
SB	SED	mg/kg	Mercury	8.01E-02	8.83E-02	0.91	no change	5.78E-02	N/A
SB	SED	mg/kg	Bis(2-ethylhexyl) phthalate	3.06E-01	4.43E-01	0.69	no change	2.27E-01	N/A

Notes and Abbreviations:

The correction factors presented in this table are applied to the modeled catfish tissue concentrations from the TrophicTrace model results presented in this Appendix that was performed using the original sediment EPCs for these COPECs. The revised sediment EPCs result from a reanalysis that excludes non-detected COPEC results with elevated detection limits (i.e., greater than the maximum detected concentration).

COPEC constituent of potential ecological concern
EPC exposure point concentration
GPC Goose Prairie Creek watershed
mg/kg milligrams per kilogram
N/A not applicable, as original arithmetic mean EPCs did not change for these COPECs
SB Saunders Branch watershed
SED sediment
UCL upper confidence limit

Appendix C

Critical Body Residues for Bioaccumulation Risk Estimates in Fish

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APPENDIX C
CRITICAL BODY RESIDUES FOR
BIOACCUMULATION RISK ESTIMATES IN FISH

C.1 Types of CBRs

For assessing potential bioaccumulation risk to target ecological receptors (fish) for ecological risk assessment, measures of exposure for a constituent of potential ecological concern (COPEC) in a receptor of concern are compared to a critical body residue (CBR), also referred to as an ecotoxicity reference value (ERV) for that COPEC and receptor group type.

Development of CBRs for fish is addressed in the following sections. Briefly, CBRs are applied as critical tissue values (CTVs) for effects-based whole-body concentrations of COPECs in aquatic receptors.

C.1.1 Aquatic Receptors

Measures of bioaccumulation exposure for COPECs in aquatic receptors (i.e., fish) are assessed as whole-body concentrations for a COPEC in a particular receptor. This CBR approach is a method for assessing exposure estimates for COPECs in aquatic receptors in complex and/or multistep food web systems (e.g., McCarty and Mackay, 1993; Jarvinen and Ankley, 1999; Jarvinen et al., 1998; Field, 1998). It is noted that: "Biomarkers and tissue residues are particularly useful when exposures across many pathways must be integrated and when site-specific factors influence bioavailability" (USEPA, 1998, p. 69).

The following description summarizes advantages and limitations when applying a tissue-residue-based approach in a risk assessment (Jarvinen and Ankley, 1999, p. 1).

> This approach has a number of advantages over using an environmental matrix-based estimation of dose, including an implicit consideration of system-specific differences in contaminant bioavailability, assimilation and metabolism differences among species or life stages, and multiple routes of exposure. This in turn results in less uncertainty with respect to extrapolation among systems and species and from laboratory-based toxicology studies to the field. Further, as discussed by McCarty and Mackay (1993), a tissue-residue-based approach aids in integrating uncertainties associated with contaminant accumulation kinetics (i.e., it reduces the confounding effect of different exposure durations, e.g., between laboratory and field studies).
>
> Although logical, the application of a tissue-based approach to exposure characterization in ERAs is challenging from several perspectives. For the approach to

be most efficient, there should be an understanding of mechanisms or modes of action (MOA) for the chemical of concern, such that appropriate tissues are sampled. For example, in order to define robust residue-based effects relationships for cationic metals, it may be necessary to focus upon tissues or sites of action (e.g., gill) that are not routinely sampled (Wood et al., 1997). Alternatively, even though such relationships may not capture mechanistic processes from a toxicological perspective, it might be possible to derive useful correlations between some internal chemical residue metric for metals and observed effects (Wood et al., 1997). Another chemical class that represents a challenge to a tissue-residue-based approach is those that are metabolized to more active forms, such that measured concentrations of the parent compound might not provide a direct indicator of toxicity. But, even in these cases, although the parent chemical may not be mechanistically related to toxicity, there may be consistent, correlative relationships between concentration of the parent compound and observed adverse effects.

An additional uncertainty in using tissue residues to predict effects is associated with the influence of kinetics of uptake and depuration on biological responses. For example, in several of the selected case studies cited herein, short-term exposure of animals to relatively high chemical concentrations that elicited toxicity resulted in lower tissue chemical concentrations than those observed in longer-term exposures to lower chemical concentrations that did not result in adverse effects. Hence, it is clear that the use of effects/tissue-residue relationships in ERA must incorporate consideration of contaminant toxicokinetics.

For aquatic receptors, effects-based critical body residues are referred to as CBRs for this Step 3 Report. COPEC concentrations modeled in whole-body fish are compared to effects-based whole-body residue levels for a COPEC in fish.

C.2 Data Collection and Development for CBRs

To address risk for COPECs for target ecological receptors (i.e., fathead minnow and brown bullhead), CBRs are focused on effects that can be most clearly linked to factors suspected to influence sustainability of populations. For this purpose, acceptable toxicological endpoints are restricted to measurements related to the following endpoints recommended in USEPA (1997), the U.S. Army Center for Health Promotion and Preventive Medicine (USACHPPM) (2000), and the U.S. Navy (USN) (2001):

- Growth or development (identified henceforth as growth/development)
- Reproduction (identified henceforth as reproduction)

- Survival or mortality (identified henceforth as survival)

While it is noted that adverse effects of concern are directed at effect endpoints that can be linked with sustainability of populations (i.e., threshold endpoints for reductions in growth or development, reproduction, or survival), the threshold values for assessing effects to receptors for this Step 3 Report are based on CBRs from the scientific literature that are developed from measurements in individual test organisms. As such, effect thresholds applied for this report address effects at both the individual and the population level.

Types of effect levels for toxicological endpoints of growth/development, reproduction, and/or survival that can be most clearly associated with no-to-low adverse effects are generally included in the following effect level categories (e.g., USEPA, 1997; USACHPPM, 2000):

- No-observed-adverse-effect-level (NOAEL)
- Lowest-observed-adverse-effect-level (LOAEL)
- Median lethal concentration (LC_{50})

To best address no-to-low adverse effect levels for endpoints of growth/development, reproduction, and survival, selections of CBRs are restricted to available values identified for effect levels of NOAELs, LOAELs, or LC_{50}s. Final effect levels of most interest are at the low end of a dose-response function, which are associated in a bounded range between a lowest LOAEL and a bounded NOAEL below the lowest LOAEL (see **Section C.3** for the approach for identifying a lowest LOAEL CBR and a bounded NOAEL CBR below the lowest LOAEL).

C.2.1 Aquatic Receptors

For CBRs in aquatic receptors, databases of whole-body CTVs for COPECs in receptor groups of fish are developed. The databases consist of NOAELs, LOAELs, and LC_{50}s for endpoints of growth/development, reproduction, and survival. The CTVs are initially developed from a number of compilations of CTVs from commonly recognized sources. Specifically Jarvinen and Ankley (1999), working in the USEPA Duluth, Minnesota office, prepared a comprehensive summary of CTVs for numerous inorganic and organic chemicals for a wide range of aquatic organisms. The Jarvinen and Ankley (1999) data were initially presented in Jarvinen et al. (1998). The U.S. Army Corps of Engineers (USACE) and USEPA have developed the Environmental Residue-Effects Database (ERED) (USACE, 2004) for CTVs for a wide range of chemicals in aquatic organisms. Other compilations of effects-based tissue residue levels that are considered include U.S. Fish and Wildlife Service (USFWS)-related reviews of Eisler (2000) and Beyer et al. (1996), and individual publications in the scientific literature.

Following collection of initial databases of whole-body CTVs, values for a particular COPEC in the particular receptor group type are screened for the following criteria.

- A test value must be clearly derived for an appropriate exposure route for a COPEC to a test organism. Appropriate exposure routes for a COPEC include uptake from contaminated water, uptake from contact and/or ingestion of contaminated sediment, or ingestion of contaminated food.

- A test value must have an effect clearly related to the desired endpoints of growth/development, reproduction, or survival, which is consistent with recommendations for appropriate types of effects for considerations of ecological risk in USEPA (1997), USACHPPM (2000), and USN (2001).

- A test value must apply to a whole-body tissue residue. Values not considered include tissue measurements in a particular organ (e.g., muscle, liver, blood), which have unknown uncertainties for converting to whole-body equivalent values.

- A test value must have a known weight basis (i.e., be identified as either a dry-weight or wet-weight tissue concentration). If a value is initially reported as a wet-weight concentration (e.g., Jarvinen and Ankley, 1999; USACE, 2004), the value is converted to a dry-weight equivalent. Wet-weight-to-dry-weight conversions use a 20 percent dry-to-wet conversion factor, which is consistent with the approach applied in Jarvinen and Ankley (1999) based on evaluations in Stephen et al. (1985). It should be noted that as the Step 3 Report models COPEC concentrations in fish on a wet weight basis for the direct contact evaluation, CBRs are converted back to a wet-weight basis for the calculation of surface water and sediment hazard quotients.

- A test value must be identified with the desired endpoint levels of NOAELs, LOAELs, or LC_{50}s. Values for an indeterminate effect level are not considered because interpretation of the ecological significance of a risk estimate based on such data as they relate to no-to-low adverse effect levels is especially problematic.

Following selection of a final candidate CTV for a particular COPEC, a final evaluation includes considerations of whether the parent study for a value is based on exposure of a test organism to a single target COPEC rather than multiple COPECs and interpretation of an effect value for a single COPEC to determine if the result is confounded from exposure to multiple COPECs. In a like manner, results from field studies are given additional scrutiny because values derived from such studies can by confounded by numerous indeterminate variables (including other COPECs) that may influence effects results. Also, the exposure duration for a value in a parent study is evaluated to determine if it is of sufficient length to indicate whether the whole-body tissue burden for a COPEC has likely reached an approximate representative value for the effect observed.

As indicated in the preceding description, selection of final CTVs for fish is an iterative approach. First, CTVs are selected from the appropriate CTV. The databases were compiled from the above noted sources for CBRs (e.g., Jarvinen and Ankley, 1999; ERED in USACE, 2004, etc.). Lowest NOAEL and LOAEL values were selected for risk estimates for evaluations.

C.3 Approach for Selecting Final CBRs

Estimates for bioaccumulation risk for COPECs incorporate a bounding approach with risk levels based on thresholds of the lowest LOAEL and an associated bounded NOAEL below the lowest LOAEL. This approach is consistent with USEPA guidelines for risk bounding (USEPA, 1997, p. 7-4):

> Key outputs of the risk characterization step are contaminant concentrations in each environmental medium that bound the threshold for estimated adverse ecological effects given the uncertainty inherent in the data and models used. The lower bound of the threshold would be based on consistent conservative assumptions and NOAEL toxicity values. The upper bound would be based on observed impacts or predictions that ecological impacts could occur. This upper bound would be developed using consistent assumptions, site-specific data, LOAEL toxicity values, or an impact evaluation.

The approach is also consistent with application of LOAEL-NOAEL bounded levels in USACHPPM (2000). In summary, bioaccumulation risk for the Step 3 Report include bounded estimates for LOAEL and NOAEL risk for a particular COPEC and receptor group. The approaches for selecting lowest LOAEL and bounded NOAEL CBRs for risk estimates are described in the following sections.

C.3.1 Lowest LOAEL CBR

By definition, a "LOAEL concentration is the lowest concentration of a contaminant that is observed to cause an adverse effect in an exposed individual" (USN, 2001). Selection of a final LOAEL for a particular COPEC and receptor group should ensure that the value is at the lowest end of values where an adverse effect might be expected to occur for types of receptors being evaluated.

In the screening process for identifying a final LOAEL CBR, available values in a database of LOAELs often span a considerable range. Additionally, LOAEL values may not be available or, if available, the lowest LOAEL may occur at a level higher than lowest values for more adverse effect levels (e.g., LC_{50}s for CTVs in fish). In these instances, a LOAEL-equivalent value is estimated by dividing the lowest LC_{50} by 10 (Calabrese and Baldwin, 1993), as indicated in the following formulas:

$$\text{LOAEL-equivalent CTV from } LC_{50} = LC_{50}/10 \qquad \textbf{Equation C1}$$

Following compilation of available LOAEL values, data sets rarely include values for specific surrogate receptors being evaluated (e.g., the surrogate receptors selected for the assessment endpoints; the fathead minnow and the brown bullhead catfish for the Step 3 Report). At the same time, surrogate receptors are intended to serve as surrogates for broader receptor groups with similar habitat and feeding characteristics. As such, final LOAEL CBRs are selected to address risk for the broader groups associated with a particular assessment endpoint as well as the specific surrogate receptors being addressed for a particular assessment endpoint.

For the preceding reasons, final candidate LOAEL CBRs for COPECs and target receptors for LOAEL-based risk estimates are selected as the lowest LOAEL value from a data set of LOAELs for a particular COPEC and receptor group type (i.e., fish) for the combined endpoints of growth/development, reproduction, and survival.

Following selection of a final lowest LOAEL for a particular COPEC and receptor group, a final evaluation includes considerations of whether the parent study for the value is based on exposure of a test organism to a single target COPEC rather than multiple COPECs that confound interpretation of observed effects measurements. In a like manner, results from field studies are given additional scrutiny because values derived from field studies can be confounded by numerous indeterminate variables (including other COPECs) that influence effects results. Finally, the exposure duration associated with a test value is considered to assess if the exposure duration is of sufficient length to infer that whole-body CBRs for aquatic receptors are likely to represent longer-term or chronic levels for observed effects.

In summary, the approach of selecting the lowest LOAEL is intended to be sufficiently inclusive for not only specific surrogate receptors but also other members in a receptor group type that is being evaluated for a particular assessment endpoint. The approach is consistent with recommend guidelines for selecting lowest LOAEL toxicity values for assessing risk to wildlife (USACHPPM, 2000). Therefore, unacceptable LOAEL risk for a surrogate receptor will be identified when the exposure value for the receptor equals or exceeds the lowest LOAEL value for a COPEC; that is, when the Hazard Quotient (HQ) for the lowest LOAEL threshold (i.e., ratio of exposure value to lowest LOAEL) is 1 or greater.

C.3.2 Bounded NOAEL CBR

The bounded NOAEL CBR for a bounded NOAEL-LOAEL risk estimate will always be a NOAEL value lower than the associated lowest LOAEL CBR. In identifying the bounded NOAEL CBR, appropriate NOAEL values may not be available or, if available, the lowest value in NOAEL data sets may occur at higher levels than lowest values in available data sets of values for more adverse effects (i.e., LOAELs or LC_{50}s for CTVs in fish). In the latter instances, a NOAEL-equivalent value is estimated by dividing a lowest LOAEL by 10 or a lowest LC_{50} by 100 (Calabrese and Baldwin, 1993; USACHPPM, 2000), as indicated in the following formulas:

NOAEL-equivalent CTV from $LC_{50} = LC_{50}/100$ **Equation C2**

In support of this approach, it is noted that "When a LOAEL value, but not a NOAEL value, is available from the literature, a standard practice is to multiply the LOAEL by 0.1 [i.e., divide by 10] and to use the product as the screening ecotoxicity value. Support for this practice comes from a data review indicating that 96 percent of chemicals included in the review had LOAEL/NOAEL ratios of five or less, and that all were ten or less (Dourson and Stara, 1983)." (USEPA, 1997, p. 1-10)

A bounded NOAEL CBR for risk estimates is selected from a data set of appropriate NOAEL values for a COPEC and receptor group type (i.e., NOAELs for effect endpoints of growth/development, reproduction, or survival when NOAELs are available below lowest LOAELs and LC_{50}s). At the same time, a broadly accepted approach for selecting a most appropriate bounded NOAEL CBR does not exist, and any procedure for selection of a bounded NOAEL value is dependent on the quantity and robustness of a subject NOAEL data set. For example, available NOAEL values often span considerable ranges, including values that may be substantially above and below lowest available LOAEL values.

As such, rather than simply selecting the lowest NOAEL in a data set of NOAEL values, approaches for identifying an appropriate bounded NOAEL CBR relative to a LOAEL CBR are addressed for ecological soil screening levels (Eco-SSLs) for wildlife in USEPA (2003) and wildlife toxicity reference values in USACHPPM (2000). Both approaches identify similar minimum data sets needed to select a bounded NOAEL CBR relative to a LOAEL CBR:

- A minimum of three NOAEL or LOAEL values for at least two species for endpoints of either growth/development, reproduction, or survival in USEPA (2003)
- A minimum of two LOAELs and one NOAEL from separate studies for test organisms from at least two taxonomic orders in a phylogenetic group for chronic exposure durations (i.e., exposures exceeding 10 percent of life spans of test organisms) in USACHPPM (2000)

If the minimum data sets of NOAELs and LOAELs are present for a COPEC, USEPA (2003) selects a final bounded NOAEL CBR as the weighted geometric mean of all NOAELs for growth/development and reproduction endpoints if the geometric mean is less than the lowest LOAEL. If the geometric mean is greater than the lowest LOAEL, the highest NOAEL below the lowest LOAEL is selected. USACHPPM (2000) selects a bounded NOAEL CBR as the highest NOAEL below the lowest LOAEL.

An adaptation of the combined approaches of USEPA (2003) and USACHPPM (2000) is used to select a bounded NOAEL value. Depending on the quantity and robustness of available data sets of NOAELs and LOAELs, an initial selection of a final bounded NOAEL CBR is achieved by a process with the following order of decreasing preference.

1. **MOST PREFERRED** – Decision J: NOAEL-CBR = geometric mean of NOAELs for endpoints of reproduction and growth/development when the geometric mean is below the lowest LOAEL.

2. Decision I(a): NOAEL-CBR = highest NOAEL for endpoints of reproduction and growth/development because a geometric mean could not be calculated, therefore the highest NOAEL below the lowest LOAEL was selected.

3. Decision I(b): NOAEL-CBR = highest NOAEL for endpoints of reproduction and growth/development because the geometric mean is greater than the lowest LOAEL.

4. Decision H: NOAEL-CBR = highest NOAEL for the endpoint of survival below the lowest LOAEL because NOAELs for endpoints of reproduction and growth/development are either not available or are greater than the lowest LOAEL.

5. Decision G: NOAEL-CBR = single available NOAEL for the endpoint of survival below the lowest LOAEL because NOAELs for endpoints of reproduction and growth/development are either not available or are greater than the lowest LOAEL.

6. Decision F: NOAEL-CBR = lowest available NOAEL because minimum data sets for the approaches of both USEPA Region 8 (2000) and USACHPPM (2000) are not available (i.e., less than three values for NOAELs and/or LOAELs).

7. Decision E: NOAEL-CBR = lowest available NOAEL because no LOAELs are available.

8. Decision D: NOAEL-CBR = lowest LOAEL divided by 10 (i.e., lowest LOAEL/10) because no NOAELs (if available) are below the lowest LOAEL.

9. **LEAST PREFERRED** – Decision C: NOAEL-CBR = lowest LC_{50} divided by 100 (i.e., LC_{50}/100) for CTVs in fish because no NOAELs or LOAELs (if available) are below the lowest LC_{50}s.

10. Decision B: NOAEL-CBR is selected as the NOAEL-CBR (and LOAEL-CBR is selected as the LOAEL-CBR) for a surrogate COPEC with similar chemical/physical properties because the COPEC of interest has no NOAELs, LOAELs, or LC_{50}s, but values are available for an appropriate surrogate COPEC.

11. Decision A: no NOAEL-CBR (or LOAEL-CBR) is identified because the COPEC of interest has no NOAELs, LOAELs, or LC_{50}s and values are not available for an appropriate surrogate COPEC; bioaccumulation risk estimates for the COPEC cannot be estimated because of a data gap for NOAEL and LOAEL CBRs.

Decisions J (most preferred) through C (least preferred) yield a bounded NOAEL CBR for a particular COPEC and receptor group. However, greater uncertainty for the bounded NOAEL value occurs as one proceeds from Decision J to Decision C because of progressively greater limitations in the quantity or robustness of data sets used to derive the bounded NOAEL CBR. NOAEL CBRs identified by Decision B have uncertainties based on not only their derivation from a surrogate COPEC but also the particular decision path applied for the surrogate COPEC and its associated NOAEL-LOAEL data sets.

Following selection of a bounded NOAEL value for a particular COPEC and receptor group, a final evaluation includes consideration of whether the parent study for a value is based on exposure of a test organism to a single target COPEC rather than multiple COPECs, which confounds interpretation of observed effects measurements. In a like manner, results from field studies are given additional scrutiny because values derived from field studies can by confounded by numerous indeterminate variables (including other COPECs) that influence effects results. Finally, the exposure duration associated with a test value is considered to assess if the exposure duration is of sufficient length to infer that whole-body CBR for aquatic receptors are likely to represent longer-term or chronic levels for observed effects.

Bioaccumulation risk estimates are not developed for COPECs associated with Decision A because no CBRs are available to develop NOAEL or LOAEL CBRs for endpoints of interest for growth/development, reproduction, or survival. Extrapolations of toxicity values from one phylogenetic group to another (e.g., crustacean to fish) are not applied to address missing CBRs (i.e., Decision A) because of the unknown magnitude of the associated uncertainty for such an extrapolation. On the latter point, it is noted that "Physiological differences between taxonomic classes are assumed to be too great to make any extrapolation useful in predicting effects to another taxonomic class of animal (e.g., using crustacean for fish)" (USACHPPM, 2000, p. 2).

Emphasis is given to sublethal endpoints for growth/development and reproduction if data sets include such values (i.e., Decisions J and I). It is to be expected that values for sublethal endpoints (i.e., growth/development or reproduction) will likely be more sensitive (i.e., lower) than values for lethal endpoints (i.e., survival). Therefore, unacceptable thresholds for bounded NOAEL risk will depend on whether the value for a bounded NOAEL is based on a less conservative lethal endpoint (i.e., survival) or a more conservative sublethal endpoint (i.e., growth/development or reproduction). If a bounded NOAEL is based on a lethal (i.e., survival) endpoint, unacceptable bounded NOAEL risk are identified when the exposure value for a surrogate receptor exceeds the bounded NOAEL value; that is, when the bounded NOAEL HQ (i.e., ratio of exposure value to NOAEL threshold) is greater than 1.

C.4 Summary of Lowest LOAEL and Bounded NOAEL CBRs

Information for CBR data sets and identification of final lowest LOAEL and bounded NOAEL CBRs are summarized in **Tables C-1(a)** and **(b)** for fish. **Table C-1(a)** provides general information for the number of CBRs evaluated, basic summary statistics for the CBR data set, and criteria used to determine a bounded NOAEL in conjunction with the lowest LOAEL. **Table C-1(b)** summarizes information for values selected as final lowest LOAEL and bounded NOAEL CBRs.

As noted above, **Table C-1(a)** provides general information for the following items:

1. Final lowest LOAEL (see **Section C.3.1** for discussion of selection process for lowest LOAEL).
2. Final bounded NOAEL (see **Section C.3.2** for discussion of selection process for bounded NOAEL).
3. The decision path followed for identification of a final bounded NOAEL from the CBR data sets of NOAELs, LOAELs, and LC_{50}s (see **Section C.3.2** for discussion of selection process for bounded NOAEL).
4. The effect type for a bounded NOAEL CBR (i.e., sublethal endpoints of growth/development [GRO] or reproduction [REP], or a lethal endpoint of survival [MOR]).
5. Comments relevant to decision paths taken for selection of the lowest LOAEL and bounded NOAEL CBRs.
6. General summaries of data sets of NOAEL, LOAEL, and LC_{50} CBRs upon which final lowest LOAEL and bounded NOAEL decisions are made. The general summaries are presented by effect level (i.e., NOAEL, LOAEL, and LC_{50}) for the following items:

    6a. Number of available CBRs for NOAELs, LOAELs, and LC_{50}s for (1) total number of CBRs endpoint types of growth/development, reproduction, and survival, (2) number of growth/development CBRs, (3) number of reproduction CBRs, and (4) number of survival CBRs.

    6b. General distribution characteristics of CBRs for NOAELs, LOAELs, and LC_{50}s for (1) minimum CBR, (2) median CBR, (3) maximum CBR, and (4) geometric mean for sublethal NOAEL CBRs (growth/development plus reproduction) if NOAEL CBR data sets have three or more values for sublethal endpoints of growth/development and/or reproduction.

Information for general distributional characteristics of CBRs in data sets of NOAELs, LOAELs, and LC_{50}s for a particular COPEC is factored into the decision process for selecting a final lowest LOAEL and bounded NOAEL CBR as described in **Sections C.3.1** and **C.3.2**, respectively.

More detailed information for CBRs selected as final bounded NOAEL and lowest LOAEL values for a particular COPEC is provided in **Table C-1(b)** for fish. This latter table provides information for following items for a final CBR:

1. The test organism and test characteristics used to develop a particular NOAEL or LOAEL value.
2. The type of endpoint measured (i.e., growth/development, reproduction, or survival).
3. General comments relevant to a test measurement and/or the measurement process.
4. The initial database or compilation source for a prospective CBR (e.g., fish CTVs from EPA-Duluth [Jarvinen and Ankley, 1999]; ERED in USACE, 2004, etc.).
5. The full citation for the original paper from which a NOAEL or LOAEL CBR is developed.

C.5 References

References cited in **Appendix C** are presented below. References cited to support the selection of CBRs are presented in **Table C-1(b)**.

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Table C-1(a)
Summary of Critical Body Residues (CBRs) for Fish

Table C-1(b)
Bounded NOAEL and Lowest LOAEL Whole-Body Critical Body Residue for Fish

Table C-1(a)
Summary of Critical Body Residues (CBRs) for Fish

	Ecotoxicity Reference Value (mg/kg dry wt whole-body tiss.)					Summary of Available NOAEL, LOAEL, and LC_{50} ERVs — NOAEL values (mg/kg dry wt whole-body tissue) — Number of values:				Distribution of REP+GRO+MOR values[a]:			
COPEC	Lowest LOAEL ERV	Bounded NOAEL ERV	NOAEL decision path (see text)	NOAEL ERV type	NOAEL- and LOAEL-ERV comments	Ttotal	Growth/ Development	Reproduction	Survival	Minimum	Geometric mean for >3 REP+GRO NOAELs	Median	Maximum
aluminum	100	64.0	I(a)	GRO	NOAEL-ERV = highest NOAEL for REP+GRO below lowest LOAEL	2	2			40.0		52.0	64
barium			A		no ERVs for REP, GRO, or MOR	0							
cadmium	0.5	0.25	I(b)	GRO	NOAEL-ERV = highest NOAEL for REP+GRO below lowest LOAEL because geometric mean of REP+GRO NOAELs > lowest LOAEL	31	9	1	21	0.180	4.39	4.00	190
chromium	44.5	11.5	F	MOR	NOAEL-ERV = lowest NOAEL < lowest LOAEL	1			1	11.5		11.5	11.5
copper	22.4	19.6	I(a)	MOR	NOAEL-ERV = highest NOAEL < lowest LOAEL	2			2	19.6		28.3	37.0
iron			A		no ERVs for REP, GRO, or MOR	0							
lead	20.1	12.7	F	GRO	NOAEL-ERV = lowest NOAEL < lowest LOAEL	1	1			12.7		12.7	12.7
manganese			A		no ERVs for REP, GRO, or MOR	0							
mercury	6.55	4.00	I(b)	GRO	NOAEL-ERV = highest NOAEL for REP+GRO below lowest LOAEL because geometric mean of REP+GRO NOAELs > lowest LOAEL	29	15	1	13	0.700	15.7	25.0	145
nickel	59	5.9	C	MOR	NOAEL = LC50/100	0							
selenium	6.58	5.40	I(b)	GRO	NOAEL-ERV = highest NOAEL for REP+GRO below lowest LOAEL because geometric mean of REP+GRO NOAELs > lowest LOAEL	23	9	2	12	0.600	10.5	13.5	95.0
silver	1.2	0.300	F	GRO	NOAEL and LOAEL-ERVs = only NOAELs and LOAELs available	2	1		1	0.300		0.300	0.300
thallium		13.6	E	MOR	NOAEL-ERV = lowest NOAEL because no LOAELs for REP, GRO, or MOR	1			1	13.6		13.6	13.6
vanadium	2.85	11.1	H	GRO	NOAEL-ERV = highest NOAEL for GRO below lowest LOAEL	3	3			2.85		12	28.7
zinc	113	96.5	I(b)	REP	NOAEL-ERV = highest NOAEL for REP+GRO below lowest LOAEL because geometric mean of REP+GRO NOAELs > lowest LOAEL	21	10	4	7	96.5	488	300	2400
acetone	1330	133.0	C	MOR	NOAEL = LC50/100	0							
bis(2-ethylhexyl)phthalate		3.30	E	MOR	NOAEL-ERV = lowest NOAEL because no LOAELs for REP, GRO, or MOR	2			2	3.30		6.65	10.0
carbone disulfide			A		no ERVs for REP, GRO, or MOR	0							
chloride			A		no ERVs for REP, GRO, or MOR	0							
4,4'-DDD	*10.0*	*9.60*	B	MOR	use 4,4'-DDT as surrogate COPEC	0							
4,4'-DDT	10.0	9.60	I(b)	MOR	NOAEL-ERV = highest NOAEL for MOR below lowest LOAEL because geometric mean of REP+GRO NOAELs > lowest LOAEL and all REP+GRO NOAELs > lowest LOAEL	17	3		14	0.0450	47.4	23.4	650
dieldrin	1.00	0.60	I(a)	GRO	NOAEL-ERV = highest NOAEL for REP+GRO below lowest LOAEL	7	2		5	0.60		10.7	755
isobutanol			A		no ERVs for REP, GRO, or MOR	0							
isopropylbenzene			A		no ERVs for REP, GRO, or MOR	0							
nitrate			A		no ERVs for REP, GRO, or MOR	0							
nitrate/nitrite			A		no ERVs for REP, GRO, or MOR	0							
p-isopropyltoluene			A		no ERVs for REP, GRO, or MOR	0							
sulfate			A		no ERVs for REP, GRO, or MOR	0							
total PCB (Aroclor)	7.65	3.80	I(b)	GRO	NOAEL-ERV = highest NOAEL for REP+GRO below lowest LOAEL because geometric mean of REP+GRO NOAELs > lowest LOAEL	40	13	2	25	2.80	138	95	6265
2,3,7,8-TCDD	0.00116	0.000625	I(b)	GRO	NOAEL-ERV = study-bounded NOAEL for GRO below lowest LOAEL because geometric mean of REP+GRO NOAELs > lowest LOAEL	10	7	1	2	0.000625	0.0189	0.00229	12.1

Notes:
[a]REP - reproduction, GRO - growth/development, MOR - surviva
CBRs (ERVs) converted from dry wt. to wet wt. by dividing by factor o
CBR critical body residu
COPEC constituents of potential ecological concer
ERV ecotoxicity reference volum
LC_{50} lethal concentration 50 is a calculated concentration of a substance in air which, when exposed for a specific length of time, is expected to cause death in 50% of an entire defined experimental animal populat
LOAEL lowest observed adverse effect leve
NOAEL no observed adverse effect leve

Table C-1(a)
Summary of Critical Body Residues (CBRs) for Fish

COPEC	Summary of Available NOAEL, LOAEL, and LC_{50} ERVs													
	LOAEL values (mg/kg dry wt whole-body tissue)							LC50 values (mg/kg dry wt whole-body tissue)						
	Number of values:				Distribution of REP+GRO+MOR values[a]:			Number of values:				Distribution of REP+GRO+MOR values[a]:		
	Total	Growth/ Development	Reproduction	Survival	Minimum	Median	Maximum	Total	Growth/ Development	Reproduction	Survival	Minimum	Median	Maximum
aluminum	2			2	100	142	184	0						
barium	0							0						
cadmium	25	10	1	14	0.50	8.00	720	12			12	2.05	40	210
chromium	1			1	44.5	44.5	44.5	0						
copper	3			3	22.4	55.5	58.5	0						
iron	0							0						
lead	1	1			20.1	20.1	20.1	0						
manganese	0							0						
mercury	13	6	1	6	6.55	47.0	185	0						
nickel	0			0				1			1	590.5	590.5	590.5
selenium	15	9		6	6.58	23.0	89.0	0						
silver	1			1	1.2	1.2	1.2	0						
thallium	0							0						
vanadium	3	1		2	11.1		15.6	0						
zinc	7	4	1	2	113	300	1500	0						
acetone	0							1			1	13300	13300	13300
bis(2-ethylhexyl)phthalate	0							0						
carbone disulfide	0							0						
chloride	0							0						
4,4'-DDD	0							0						
4,4'-DDT	7	2	2	3	10.0	21.0	120	4			4	58	304	800
dieldrin	2			2	1.00	85.5	170	1			1	265	265	265
isobutanol	0							0						
isopropylbenzene	0							0						
nitrate	0							0						
nitrate/nitrite	0							0						
p-isopropyltoluene	0							0						
sulfate	0							0						
total PCB (Aroclor)	7	3	2	2	7.65	75.0	415	9	0	0	9	230	1280	1620
2,3,7,8-TCDD	6	4	1	1	0.00116	0.00545	6.90	1			1	0.0700	0.0700	0.0700

Notes:
[a] REP - reproduction, GRO - growth/development, MOR - surviva
CBRs (ERVs) comverted from dry wt. to wet wt. by dividing by factor o
CBR critical body residu
COPEC constituents of potential ecological concer
ERV ecotoxicity reference volum
LC_{50} lethal concentration 50 is a calculated concentration of a substance in air which, when exposed for a specific length of time, is expected to cause death in 50% of an entire defined experimental animal populat
LOAEL lowest observed adverse effect leve
NOAEL no observed adverse effect leve

Table C-1(b)
Bounded NOAEL and Lowest LOAEL Whole-Body Critical Body Residue for Fish

COPEC	Test Organism: Common Name	Test Organism: Scientific Name	Form for Exposure Chemical	Exposure Medium	Measurement Endpoint	Effect Category	Effect to Test Organism	CTV – Tissue Concentration	CTV Unit	Estimated %dry wt	CTV (mg/kg dry wt)	Exposure Route	Life Stage	Test Site/ Conditions	Test Duration (days)	Comments	Initial Compilation Source	Full Citation
Aluminum	Trout - Brook	Salvelinus fontinalis	aluminum sulfate	freshwater	NOAEL	sublethal	growth/ development	12.8	mg/kg wet	20%	64.0	Water; nominal 200 ug/L	Juvenile	Lab; flow-through aquarium	56	no significant adverse effect (total body weight or mortality) for nominal water concentration of 200 ug/L at pH=7.2; NOAEL based on highest measured aluminum tissue concentration	original paper (ERED-JAW10)	Cleveland, L., D.R. Buckler, and W.G. Brumbaugh. 1991. Residue dynamics and effects of aluminum on growth and mortality in brook trout. Environmental Toxicology and Chemistry, 10: 243-248.
	Atlantic salmon	Salmo salar	aluminum chloride	freshwater	LOAEL	lethal	survival	20.0	mg/kg wet	20%	100	Water; 67.5-240.3 µg/L	Alevin, newly hatched	Lab; Renewal, 1 d	30	lowest bounded NOAEL-LOAEL from same test organism and study; residues in dead fish	EPA-Duluth-360	Peterson, R.H., R.A. Bourbonniere, G.L. Lacroix, D.J. Martin-Robichaud, P. Takats, and G. Brun. 1989. Responses of Atlantic salmon (Salmo salar) alevins to dissolved organic carbon and dissolved aluminum at low pH. Water Air and Soil Pollution, 46: 399-413.
Barium					NOAEL													
Barium					LOAEL													
Cadmium	Atlantic salmon	Salmo salar	cadmium chloride	freshwater	NOAEL	sublethal	growth/ development	0.25	mg/kg dry	(na)	0.25	Water; 0.13 µg/L	Embryo-Alevin	Lab; Recirculating	43-64 weeks	no reduction in growth/development for exposure of alevins to $CdCl_2$; Cd tissue conc. in control at 64 weeks with no adverse growth/development---value corresponds to control (0.13 ug Cd/L at 9.6°C)	original paper (EPA-Duluth-379)	Rombough, P.J. and E.T. Garside. 1982. Cadmium toxicity and accumulation in eggs and alevins of Atlantic salmon, Salmo salar. Canadian Journal of Zoology, 60: 2006-2014.
	Atlantic salmon	Salmo salar	cadmium chloride	freshwater	LOAEL	sublethal	growth/ development	0.50	mg/kg dry	(na)	0.50	Water; 0.47 µg/L	Embryo-Alevin	Lab; Recirculating	43-64 weeks	reduced growth/development for exposure of alevins to $CdCl_2$; lowest Cd tissue conc. at 64 weeks associated with adverse growth/development---value corresponds to treatment with lowest conc. of total Cd in water (0.47 ug/L at 9.6°C) for all treatments with adverse effects	original paper (EPA-Duluth-379)	Rombough, P.J. and E.T. Garside. 1982. Cadmium toxicity and accumulation in eggs and alevins of Atlantic salmon, Salmo salar. Canadian Journal of Zoology, 60: 2006-2014.
Chromium	Trout - Rainbow	Salmo gairdneri	Cr^{6+} (as Na_2CrO_4)	freshwater	NOAEL	lethal	survival	2.30	mg/kg wet	20%	11.5	Absorption	fingerling	25 L aquaria renewed daily	4	highest NOAEL below lowest LOAEL for bounded NOAEL-LOAEL study for same test organism and study; NOAEL=highest whole body tissue conc. of 2.3 mg chromium/kg wet wt with no decrease in survival below survival LOAEL---corresponds to exposure concentration of Cr^{6+} of 5.0 mg/L and pH=7.8 (pH closest to that of seawater for study)	original paper (ERED-URS215)	Van Der Putte, L., J. Lubbers, and Z. Kolar. 1981. Effect of pH on uptake, tissue distribution and retention of hexavelent chromium in rainbow trout (Salmo gairdneri). Aquatic Toxicology, 1: 3-18.
	Trout - Rainbow	Salmo gairdneri	Cr^{6+} (as Na_2CrO_4)	freshwater	LOAEL	lethal	survival	8.90	mg/kg wet	20%	44.5	Absorption	fingerling	25 L aquaria renewed daily	4	lowest LOAEL for bounded NOAEL-LOAEL study for same test organism and study; LOAEL=lowest whole body tissue conc. of 8.9 mg chromium/kg wet wt with observed reduction in survival (63% survival) below control/NOAEL survival---corresponds to exposure concentration of Cr^{6+} of 16.5 mg/L and pH=7.8 (pH closest to that of seawater for study)	original paper (ERED-URS215)	Van Der Putte, L., J. Lubbers, and Z. Kolar. 1981. Effect of pH on uptake, tissue distribution and retention of hexavelent chromium in rainbow trout (Salmo gairdneri). Aquatic Toxicology, 1: 3-18.
Copper	Trout - Rainbow	Oncorhynchus mykiss	copper chloride	freshwater	NOAEL	lethal	survival	19.6	mg/kg dry	(na)	19.6	Combined: water 12 ug/L and diet 440 ug/g	fry	Lab; Flow-through	60	exposure from water at concentration of 12 ug/L and one of 3 dietary concentrations (440, 830, and 1000 ug/g dry wt of food); no significant reduction in survival at dietary concentration of 440 ug/g dry wt of food used as NOAEL (tissue concentration=19.6 mg copper/kg dry wt of whole body tissue)	original paper (ERED-ABB2)	Mount, D.R., A.K. Barth, T.D. Garrison, K.A. Barten, and J.R. Hockett. 1994. Dietary and waterborne exposure of rainbow trout (Oncorhynchus mykiss) to copper, cadmium, lead and zinc using a live diet. Environmental Toxicology and Chemistry, 13(12):2031-20
	Trout - Rainbow	Oncorhynchus mykiss	copper chloride	freshwater	LOAEL	lethal	survival	22.4	mg/kg dry	(na)	22.4	Combined: water 12 ug/L and diet 830 ug/g	fry	Lab; Flow-through	60	exposure from water at concentration of 12 ug/L and one of 3 dietary concentrations (440, 830, and 1000 ug/g dry wt of food); reduced survival (69% at dietary concentration of 830 ug/g dry wt of food) used as LOAEL (tissue concentration=22.4 mg copper/kg dry wt of whole body tissue)	original paper (ERED-ABB2)	Mount, D.R., A.K. Barth, T.D. Garrison, K.A. Barten, and J.R. Hockett. 1994. Dietary and waterborne exposure of rainbow trout (Oncorhynchus mykiss) to copper, cadmium, lead and zinc using a live diet. Environmental Toxicology and Chemistry, 13(12):2031-2041.
Iron					NOAEL													
					LOAEL													
Lead	brook trout	Salvelinus fontinalis	lead nitrate	freshwater	NOAEL	sublethal	growth/ development	12.7	mg/kg dry	(na)	12.7	Absorption	alevin-juvenile (3rd generation)	Lab: flowthrough tanks	12 weeks	exposure from water concentrations at 34-119 ug Pb/L; NOAEL=highest tissue concentration for treatments <119 ug Pb/L where no decrease in growth	original paper (EPA-Duluth-207; ERED-URS124)	Holcombe, G.W., D.A. Benoit, E.N. Leonard, and J.M. McKim. 1976. Long-term effects of lead exposure on three generations of brook trout (Salvelinus fontinalis). Journal of the Fisheries Research Board of Canada, 33: 1731-1741.
	brook trout	Salvelinus fontinalis	lead nitrate	freshwater	LOAEL	sublethal	growth/ development	20.1	mg/kg dry	(na)	20.1	Adult fish + Water; 119 µg/L	alevin-juvenile (3rd generation)	Lab: flowthrough tanks	12 weeks	exposure from water concentrations at 34-119 ug Pb/L; LOAEL=tissue concentration for significant reduction in growth (P<0.05) for exposure in 3rd generation juveniles at lead nitrate concentration in water of 119 ug/L	original paper (EPA-Duluth-207)	Holcombe, G.W., D.A. Benoit, E.N. Leonard, and J.M. McKim. 1976. Long-term effects of lead exposure on three generations of brook trout (Salvelinus fontinalis). Journal of the Fisheries Research Board of Canada, 33: 1731-1741.

Table C-1(b) (*continued*)
Bounded NOAEL and Lowest LOAEL Whole-Body Critical Body Residue (CBRs) for Fish

COPEC	Test Organism: Common Name	Test Organism: Scientific Name	Form for Exposure Chemical	Exposure Medium	Measurement Endpoint	Effect Category	Effect to Test Organism	CTV – Tissue Concentration	CTV Unit	Estimated %dry wt	CTV (mg/kg dry wt)	Exposure Route	Life Stage	Test Site/ Conditions	Test Duration (days)	Comments	Initial Compilation Source	Full Citation
Manganese					NOAEL													
					LOAEL													
Mercury	Fathead minnow	Pimephales promelas	mercuric chloride	freshwater	NOAEL	sublethal	growth/ development	0.800	mg/kg wet	20%	4.00	Water; 0.31 µg/L	larvae to fingerling	Lab; Flow-through	60	Growth (measured as both length and weight) relative to the control was NOT significantly reduced (P>0.05)	original paper (EPA-Duluth-412; ERED-SEQ97-31)	Snarski, V.M. and G.F. Olson. 1982. Chronic toxicity and bioaccumulation of mercuric chloride in the fathead minnow (Pimephales promelas). Aquatic Toxicology, 2:143-156.
	Fathead minnow	Pimephales promelas	mercuric chloride	freshwater	LOAEL	sublethal	growth/ development	1.31	mg/kg wet	20%	6.55	Water; 0.58 µg/L	larvae to fingerling	Lab; Flow-through	60	Growth (measured as both length and weight) relative to the control was significantly reduced (P<0.05)	original paper (EPA-Duluth-412; ERED-SEQ97-31)	Snarski, V.M. and G.F. Olson. 1982. Chronic toxicity and bioaccumulation of mercuric chloride in the fathead minnow (Pimephales promelas). Aquatic Toxicology, 2:143-156.
Nickel					NOAEL													
	Carp	Cyprinus carpio	nickel chloride	freshwater	LOAEL	mortality	survival	118.1	mg/kg wet	20%	590.5	Water, 40 mg/L	15 grams	Lab; Static	4	Survival reduced 50%.	Jarvinen and Ankley (1999)	Sreedevi, P., A. Suresh, B. Sivaramarkariskna, B. Prabhavathi, and K. Radharkrishnaiah, 1992, Bioaccumulation of nickel in the organs of the freshwater fish, Cyprinus carpio, and the freshwater mussel, Lamellidens marginalis, under lethal and sublethal nickel stress, Chemosphere 24: 29-36.
Selenium	Chinook salmon	Oncorhynchus tshawytscha	seleno-DL-methionine	freshwater	NOAEL	sublethal	growth/ development	5.40	mg/kg dry	(na)	5.40	Diet; 9.6 µg/g	Larvae, swim-up	Lab; Flow-through	90	exposure to selenium in diet at one of 5 concentrations ranging from 3.2-35.5 mg selenium/kg food; NOAEL=no effect on weight or length gain in 90 days for food conc. of 9.6 mg selenium/kg food	original paper (EPA-Duluth-162; ERED-URS98)	Hamilton, S.J., K.J. Buhl, N.L. Faerber, R.H. Wiedmeyer, and F.A. Bullard. 1990. Toxicity of organic selenium in the diet to chinook salmon. Environmental Toxicology and Chemistry, 9: 347-358.
	Fathead minnow	Pimephales promelas	selenate, selenite + seleno-L-methionine mixture	freshwater	LOAEL	sublethal	growth/ development	6.58	mg/kg dry	(na)	6.58	Diet; average conc. of 5.2-29.5 ppm	Adult	Lab; 60-L static freshwater tanks	98	growth relative to control reduced for exposure to dietary selenium at 20.3 ppm; LOAEL tissue conc. of 6.58 mg selenium/kg dry wt of whole body tissue for exposure to dietary selenium at 20.3 ppm; COPC form: selenate (25%), selenite (50%), and seleno-L-methionine (25%) mixture	original paper (EPA-Duluth-336)	Ogle, R.S. and A.W. Knight. 1989. Effects of elevated foodborne selenium on growth and reproduction of the fathead minnow (Pimephales promelas). Archives of Environmental Contamination and Toxicology, 18: 795-803.
Silver	Bluegill	Lepomis macrochirus	silver nitrate	freshwater	NOAEL	sublethal	growth/ development	0.0600	mg/kg wet	20%	0.300	Water; 70 µg/L	yearlings	Lab; Static, aerated	6 months	exposure from water at 1 of 3 concentrations (0.9, 7, or 70 ug/L); NOAEL tissue concentration (0.30 mg silver/kg dry weight whole body tissue) is highest tissue concentration of silver at 6 months for all treatments because no treatments caused significant decrease in growth/development; tissue concentration reported per kg of ash, which was assumed to be equivalent to kg dry wt; NOAEL estimated from figure in paper	original paper (EPA-Duluth-88)	Coleman, R.L. and J.E. Cearley. 1974. Silver toxicity and accumulation in largemouth bass and bluegill. Bulletin of Environmental Contamination and Toxicology, 12: 53-61.
	Trout - Rainbow	Oncorhynchus mykiss	silver	freshwater	LOAEL	lethal	LD33	0.240	mg/kg wet	20%	1.2	NA	Embryo	NA	NA	NA	ERED-MECO3-048	Galvez, F.C., C. Hogstrand, J.C. McGeer, and C.M. Wood, 2001, Aquatic Toxicology, 55: 95-112.
Thallium					LOAEL													
	Bluegill	Lepomis macrochirus	thallium	freshwater	NOAEL	lethal	mortality	2.72	mg/kg wet	20%	13.6	Absorption	Immature	NA	NA	No effect on mortality	ERED-URS10	Barrows, M.E., S.R. Petrocelli, K.J. Macek, and J.J. Carroll, 1980, Dynamics, Exposure, and Hazard Assessment of Toxic Chemicals, p. 379-392.
Vanadium	Flagfish	Jordanella floridae	vanadium pentoxide	freshwater	NOAEL	sublethal	growth	0.57	mg/kg wet	20%	2.85	Water; 0.04 mg/L	Larvae, 2nd generation	Lab; Flow through	30	No effect on growth	Jarvinen and Ankley (1999)	Holiday, D.A. and J.B. Sprague, 1979, Chronic toxicity of vanadium to flagfish, Water Res. 13:905-910.
	Flagfish	Jordanella floridae	vanadium pentoxide	freshwater	LOAEL	sublethal	growth	2.22	mg/kg wet	20%	11.1	Water; 0.17 mg/L	Larvae, 2nd generation	Lab; Flow through	30	Reduced growth	Jarvinen and Ankley (1999)	Holiday, D.A. and J.B. Sprague, 1979, Chronic toxicity of vanadium to flagfish, Water Res. 13:905-910.

Table C-1(b) (*continued*)
Bounded NOAEL and Lowest LOAEL Whole-Body Critical Body Residue (CBRs) for Fish

COPEC	Test Organism: Common Name	Test Organism: Scientific Name	Form for Exposure Chemical	Exposure Medium	Measurement Endpoint	Effect Category	Effect to Test Organism	CTV – Tissue Concentration	CTV Unit	Estimated %dry wt	CTV (mg/kg dry wt)	Exposure Route	Life Stage	Test Site/ Conditions	Test Duration (days)	Comments	Initial Compilation Source	Full Citation
Zinc	Trout - Brook	Salvelinus fontinalis	zinc sulfate	freshwater	NOAEL	sublethal	reproduction	19.3	mg/kg wet	20%	96.5	Absorption	Egg-embryo		120 days adults followed by 84 days post-hatching for embryos	No Reduction In Percentage Of Eggs Hatching In 2nd Generation Trout	ERED-URS123	Holcombe, G.W., D.A. Benoit, and E.N. Leonard. 1979. Long-term effects of zinc exposures on brook trout (Salvelinus fontinalis). Transactions of the American Fisheries Society, 108: 76-87.
	Trout - Brook	Salvelinus fontinalis	zinc sulfate	freshwater	LOAEL	sublethal	reproduction	22.6	mg/kg wet	20%	113	Absorption	Egg-embryo		120 days adults followed by 84 days post-hatching for embryos	Reduction In Percentage Of Eggs Hatching In 2nd Generation Trout	ERED-URS123	Holcombe, G.W., D.A. Benoit, and E.N. Leonard. 1979. Long-term effects of zinc exposures on brook trout (Salvelinus fontinalis). Transactions of the American Fisheries Society, 108: 76-87.
Acetone					NOAEL													
	Trout - Rainbow	Oncorhynchus mykiss	Acetone	freshwater	LOAEL	lethal	mortality	2660	mg/kg wet	20%	13300	Injection	NA	NA	NA	Median lethal dose (LC-50).	ERED-URS121	Hodson, P.V., D.G. Dixon, and K.I.E. Kaiser. 1988. Measurement of median lethal dose as a rapid indication of contaminant toxicity to fish. Environmental Toxicology and Chemistry, 7: 443-454.
Bis(2-Ethylhexyl) Phthalate	Bluegill	Lepomis macrochirus	bis(2-ethylhexyl) phthalate	freshwater	NOAEL	lethal	survival	0.660	mg/kg wet	20%	3.30	Absorption	Immature	NA	NA	No Effect On Mortality	ERED-URS10	Barrows, M.E., S.R. Petrocelli, K.J. Macek, and J.J. Carroll. 1980. Bioconcentration and elimination of selected water pollutants by bluegill sunfish (Lepomis macrochirus). In Haque, R., ed., Dynamics, Exposure and Hazard Assessment of Toxic Chemicals, pp. 379-392.
					LOAEL													
Carbon Disulfide					NOAEL													
					LOAEL													
Chloride					NOAEL													
					LOAEL													
4,4'-DDD			*(use 4,4'-DDT)*		NOAEL						*9.60*							
					LOAEL						*10.0*							
4,4'-DDT	Brook trout	Salvelinus fontinalis	C-14 4,4'-DDT	freshwater	NOAEL	lethal	survival	1.92	mg/kg wet	20%	9.60	Water: 3 ng/L Food: 3 ug/g	Juvenile	Lab: flow-through	120	no significant increases in mortality relative to controls for exposure to either dietary 4,4'-DDT (3ppm) or 4,4'-DDT in water (3ng/L); NOAEL = highest average tissue concentration at 120 days exposure (i.e., NOAEL = 1.92 mg 4,4'-DDT/kg wet wt of whole body tissue)	original paper (EPA-Duluth-267)	Macek, K.J. and S. Korn. 1970. Significance of the food chain in DDT accumulation by fish. Journal of the Fisheries Research Board of Canada, 27: 1496-1498.
	Trout -Lake	Salvelinus namaycush	4,4'-DDT	freshwater	LOAEL	lethal	survival	2.00	mg/kg wet	20%	10.0	water	Egg-embryo		fertilization to start of fry feeding	reduced survival for whole body tissue residues for exposure of eggs through yolk absorption by fry; LOAEL = 2.0 mg 4,4'-DDT/kg wet wt of whole body tissue, which was lowest tissue concentration associated with mortality	original paper (ERED-URS44)	Burdick, G.E., E.J. Harris, H.J. Dean, T.M. Walker, J. Skea, and D. Colby. 1964. The accumulation of DDT in lake trout and the effect on reproduction. Transactions of the American Fisheries Society, 93:127-136.
Dieldrin	Rainbow trout	Salmo gairdneri	dieldrin	freshwater	NOAEL	sublethal	growth/ development	0.120	mg/kg wet	20%	0.600	Water; 0 ug/L Diet; 0.087 ug/g (wet weight)	Juvenile	Lab: flow-through	112	subchronic exposure study; Fish fed at 2% of body weight	original paper (EPA-Duluth-406)	Shubat, P.J. and L.R. Curtis. 1986. Ration and toxicant preexposure influence dieldrin accumulation by rainbow trout (Salmo gairdneri). Environmental Toxicology and Chemistry, 5: 69-77.
	Rainbow trout	Salmo gairdneri	dieldrin	freshwater	LOAEL	lethal	survival	0.200	mg/kg wet	20%	1.00	Water; 0.08 ug/L Diet; 0 ug/g (wet weight)	Juvenile	Lab: flow-through	112	subchronic exposure study; Fish fed at 2% of body weight	original paper (EPA-Duluth-406)	Shubat, P.J. and L.R. Curtis. 1986. Ration and toxicant preexposure influence dieldrin accumulation by rainbow trout (Salmo gairdneri). Environmental Toxicology and Chemistry, 5: 69-77.
Isobutanol					NOAEL													
					LOAEL													
Isopropylbenznene					NOAEL													
					LOAEL													
Nitrate					NOAEL													
					LOAEL													
Nitrate/Nitrite					NOAEL													
					LOAEL													

Table C-1(b) (*continued*)
Bounded NOAEL and Lowest LOAEL Whole-Body Critical Body Residue (CBRs) for Fish

COPEC	Test Organism: Common Name	Test Organism: Scientific Name	Form for Exposure Chemical	Exposure Medium	Measurement Endpoint	Effect Category	Effect to Test Organism	CTV – Tissue Concentration	CTV Unit	Estimated %dry wt	CTV (mg/kg dry wt)	Exposure Route	Life Stage	Test Site/ Conditions	Test Duration (days)	Comments	Initial Compilation Source	Full Citation
P-Isopropyltoluene					NOAEL													
					LOAEL													
Sulfate					NOAEL													
					LOAEL													
PCB-Aroclor	Lake trout	Salvelinus namaycush	Aroclor 1254	Freshwater	NOAEL	sublethal	growth/ development	3.80	mg/kg dry	(na)	3.80	Absorption	fry	A1254 water conc. of 40-50 ng/L	17	PCB Dosed With No Acetone Carrier; No Effect On Growth (weight or length) or Mortality	original ref; ERED-URS173	Mac, M.J. and J.G. Seelye. 1981. Potential influence of acetone in aquatic bioassays testing the dynamics and effects of PCBs. Bulletin of Environmental Contamination and Toxicology, 27:359-367.
	Lake trout	Salvelinus namaycush	Aroclor 1254	freshwater	LOAEL	lethal	survival	1.53	mg/kg wet	20%	7.65	Water; 20.8 ng/L Diet; 1.05 µg/g	Fry	Lab; flow-through	176		EPA-Duluth-28	Berlin, W.H., R.J. Hasselberg, and M.J. Mac. 1981. Growth and mortality of fry of Lake Michigan lake trout during chronic exposure to PCBs and DDE. U.S. Fish and Wildlife Service, Technical Paper 105. Ann Arbor, MI. p. 11-22.
2,3,7,8-TCDD	Salmon-coho	Oncorhynchus kisutch	2,3,7,8-TCDD/TEF - fish TEF=1	Freshwater	NOAEL	sublethal	growth/ development	0.000125	mg/kg wet	20%	0.000625	Water: flowthrough containers	Adult		96 hour exposure; endpoint measured 114 days after exposure	exposure from water at one of 6 concentrations; NOAEL = 0.000125 mg 2,3,7,8-TCDD/kg wet wt of whole body tissue associated with reduced weight gain at 114 days post-exposure for 96 hours exposure at 0.54ng TCDD in water per gram wet-fish body weight at beginning of experiment	original papers (ERED-URS199)	Miller, R.A., L.A. Norris, and B.R. Loper. 1979. The response of coho salmon and guppies to 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) in water. Transactions of the American Fisheries Society, 108: 401-407.; Van den Berg, M., L. Birnbaum, A.T.C. Bosveld, B. Brunstrom, P. Cook, M. Feeley, J.P. Giesy, A. Hanberg, R. Hasegawa, S.W. Kennedy, T. Kubiak, J.C. Larsen, F.X.R. van Leeuwen, A.K.D. Liem, C. Nolt, R.E. Peterson, L. Poellinger, S. Safe, D. Schrenk, D. Tillitt, M. Tysklind, M. Younes, F. Waern, and T. Zacharewski. 1998. Toxic Equivalency Factors (TEFs) for PCBs, PCDDs, PCDFs for humans and wildlife. Environmental Health Perspectives, 106 (12): 775-792.
	Salmon-coho	Oncorhynchus kisutch	2,3,7,8-TCDD/TEF - fish TEF=1	Freshwater	LOAEL	sublethal	growth/ development	0.000232	mg/kg wet	20%	0.00116	Water: flowthrough containers	Adult		12 hour exposure; endpoint measured 114 days after exposure	exposure from water at one of 6 concentrations; LOAEL = 0.000232 mg 2,3,7,8-TCDD/kg wet wt of whole body tissue associated with reduced weight gain at 114 days post-exposure for 12 hours exposure at 5.4ng TCDD in water per gram wet-fish body weight at beginning of experiment	original papers (ERED-URS199)	Miller, R.A., L.A. Norris, and B.R. Loper. 1979. The response of coho salmon and guppies to 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) in water. Transactions of the American Fisheries Society, 108: 401-407.; Van den Berg, M., L. Birnbaum, A.T.C. Bosveld, B. Brunstrom, P. Cook, M. Feeley, J.P. Giesy, A. Hanberg, R. Hasegawa, S.W. Kennedy, T. Kubiak, J.C. Larsen, F.X.R. van Leeuwen, A.K.D. Liem, C. Nolt, R.E. Peterson, L. Poellinger, S. Safe, D. Schrenk, D. Tillitt, M. Tysklind, M. Younes, F. Waern, and T. Zacharewski. 1998. Toxic Equivalency Factors (TEFs) for PCBs, PCDDs, PCDFs for humans and wildlife. Environmental Health Perspectives, 106 (12): 775-792.

Notes:

A blank row for a COPEC indicates no CTVs available for this constituent.

C	centigrade
CBR	critical tissue value
COPEC	constituent of potential ecological concern
CD	cadmium per Lite
LOAEL	lowest observed adverse effect level
ug/L	micrograms per liter
ug/kg	micrograms per kilogram
ug/g	micrograms per gram
mg/kg	milligrams per kilogram
NOAEL	no observed adverse effect level
Pb/L	lead per liter
ppm	parts per million

Appendix D

Small Mammal Biouptake Study

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APPENDIX D
SMALL MAMMAL BIOUPTAKE STUDY

D.1 Introduction

A small mammal biological uptake study was conducted at Longhorn Army Ammunition Plant (LHAAP) to calculate site-specific bioaccumulation factors (BAF) to be used in the food chain models of the Step 3 evaluation (see Section 7.0 of the Step 3 report). Uptake from abiotic media into organisms may be strongly affected by such factors as the chemical form of the element or compound, the bioavailability of the chemical in the medium matrix, the ability of an organism to potentially sense and avoid contamination (i.e., behavioral response), and biological regulatory mechanisms of the organism in question (i.e., metabolism and/or excretion). Conservative assumptions in the food chain model often overestimate the potential for a chemical to be incorporated and accumulate in an organism (e.g., the assumption of 100 percent bioavailability). Therefore, site-specific studies to develop in situ BAFs, by comparing concentrations in media with concentrations in on-site organisms to develop site-specific uptake factors, are extremely useful for developing more accurate total daily doses for use in the food chain model.

Generally, field studies are used to develop site-specific uptake factors during later stages of the ecological risk assessment (i.e., Steps 4 through 7). However, a unique opportunity created by the timing of a concurrent Rodent Sperm Analysis (RSA) study at LHAAP, being conducted by U.S. Army Center for Health Promotion and Preventive Medicine (USACHPPM), allowed the development of BAFs during Step 3. The USACHPPM study required the capture of a large number of small mammals from many different parts of the installation. Therefore, Shaw Environmental, Inc. (Shaw) and USACHPPM personnel coordinated the capture of additional organisms for the purposes of developing Step 3 soil-to-small mammal BAFs.

D.2 Description of Methodology

BAFs are developed by calculating the ratio of concentrations of chemicals in an organism to concentrations in an abiotic media. The following subsections describe the methodology used for developing the soil-to-small mammal BAFs for the Step 3 evaluation.

D.2.1 Study Organism

The species selected for developing the soil-to-small mammal BAFs was the hispid cotton rat (*Sigmodon hispidus*). This species was selected because it was commonly found at the installation, and the typical body weight of an individual (80 to 140 grams) provided a sufficient amount of tissue for the analysis of multiple suites of chemicals. The Hispid Cotton Rat was also selected because of its high contact rate to soil. This species burrows shallow tunnels in the soil and uses underground dens for shelter. The diet of the hispid cotton rat is primarily vegetation (e.g., grass and other plants), but they are also known to eat the eggs and young of ground-nesting birds and insects. Therefore, this organism is potentially exposed to chemicals in soil via a number of exposure pathways. In comparison to the measurement receptors selected for evaluation in this Step 3 report, the hispid cotton rat's life history is most similar to the eeer mouse. Because of its abundance and position in the food chain, the hispid cotton rat likely forms a prey base for higher trophic level organisms present in the area, such as the red fox and red-tailed hawk.

In addition to the hispid cotton rat, a single shrew (*Sorex spp.*) was also collected and analyzed for body burden residues of metals. The small body size and limited number of organisms captured prohibited its use as the primary species in the uptake factor study. The shrew is an insectivore, and nearly its entire diet consists of earthworms. Therefore, it was included in the uptake factor analysis for informational purposes and to compare with concentrations detected in hispid cotton rats.

D.2.2 Mammal Collection and Analysis

Sherman Traps baited with food were used to collect live organisms. The traps were checked the morning after the day they were set. Trapped organisms were field-processed, taken to a mobile laboratory, euthanized, and frozen immediately. The organisms were held in a freezer until the co-located soil samples were collected and analyzed (see **Section D.2.3**). The frozen organisms were then sent to the laboratory and were analyzed for the same suite of chemicals detected in the soil samples.

Sixteen organisms were captured and analyzed for body burdens, including 15 hispid cotton rats (all samples except MAM-GP150-TIS) and one shrew (sample MAM-GP150-TIS). The hispid cotton rats were analyzed for the following suite of chemicals: dioxins/furans, metals, pesticides/PCBs, and SVOCs (**Table D-1**). Percent lipids were also collected for potential use in the food chain models. Because so little tissue was available for the shrew sample, the only analyses that could be run on this sample were metals and percent lipids.

Locations of the collected mammals are presented in **Figure D-1**. The areas were selected based on consultation with LHAAP stakeholders and were based on known areas of contaminated soil to provide a range of potentially contaminated and uncontaminated (i.e., background) areas. The areas where mammals were collected are described as follows:

- **Reference area (Samples MAM-CA518, -562, -586, -958, -966, and -990)**: The reference area was located at an off-site location just to the southeast of the LHAAP perimeter fence. Because this area was not within LHAAP, site-related contamination was considered unlikely. Samples from the reference area were used in the development of uptake factors and were also used to compare on-site and off-site uptake factors.
- **Goose Prairie Creek drainage (sample MAM-GP150)**: This sample location is where the single shrew was collected. This area consists of bottomland hardwood forest. USACHPPM selected this location for sampling because the area receives runoff from a number of contaminated sites and is an area of concern for stakeholders (USACHPPM, 2004).
- **Plant 2 Area (Samples MAM-P2212, P2237, P2268, P2544, P2571, and P2586)**: Plant 2 is in the Industrial Sub-Area, and was one of the most intensely used areas at LHAAP. This area was selected because of elevated concentrations of contaminants detected during previous investigations (Jacobs, 2003, 2002, and 2001).
- **Plant 2 Drainage (Samples MAM-W220, -W230, and W-250)**: These samples were collected from a drainage area downgradient of Plant 2.

The RSA report (USACHPPM, 2004) provides additional details of the methodologies used to trap, process, and handle the organisms.

D.2.3 Soil Collection and Analysis

Surface soil (0 to 0.5 feet bgs) samples were collected several weeks after the mammal samples were collected. Field notes, grid flags, and global positioning system (GPS) coordinates were used to ensure that the collocated soil samples were collected from identical mammal capture locations. Small mammals roam throughout their home range on a daily basis, and are not continuously exposed to soil from any single location throughout their lives. In order to reflect the spatial pattern of their exposure, the point location where the mammal was collected was assumed to be the center of its local home range. The home range of a hispid cotton rat is likely to vary according to population density and resource availability, but was assumed to be approximately the same as the deer mouse (0.03 to 0.3 acres). Therefore, to reflect the average soil concentration over the target species' home range, five soil samples were collected from each mammal capture location: one from the point location, and one from 50 feet away from the point location in each of the four cardinal directions. This sampling strategy covered approximately 0.06 acres, reflecting the low end of the deer mouse/hispid cotton rat home range. The samples were then combined to form a composite soil sample for each mammal capture location. Occasionally, one or more of the five samples could not be collected because of natural landscape features (e.g., if the sample was located in a flooded area) or because it was located in an area that would likely not be incorporated into that organism's home range. For example, individual samples were eliminated if it was located in a different habitat type (e.g., forest that bordered the grassy habitat where the mammal was trapped), or was on the opposite bank of a stream from the trap location, etc. All composite samples were comprised of at least four individual soil samples.

A co-located (composite) soil sample was not collected for one of the mammal capture locations (sample location MAM-W230-SS) because it was in close proximity (less than 20 feet) to another sample location (MAM-W220-SS). Therefore, the soil concentrations at MAM-W220-SS were assumed to be representative of both mammal capture locations, and soil data collected from this location were compared with tissue results from both mammal locations to develop uptake factors.

The analytical suites for co-located soil samples were selected based on the list of constituents of potential ecological concern (COPEC) identified during the screening-level ecological risk assessment investigations (Jacobs 2003a, 2002d, and 2001a). The soil samples collected are presented in **Table D-1**. The following analytical suites were run for soil samples: dioxins/furans, explosives, general chemistry parameters, metals, PAHs, and pesticides/PCBs. Nitroaromatics, perchlorate, and cyanide were not detected in any soil sample. Therefore, these chemical suites were not selected for tissue analysis.

D.2.4 Calculation of BAFs

For all chemicals identified in both the small mammal tissue and soil samples for a given location, a ratio was calculated by dividing the concentration in tissue by the concentration in the composite soil sample. Note: completed data sets for both soil and tissue samples are provided on a CD-ROM enclosed with the main volume report (Exhibit 1). In general, if the chemical was detected in either the tissue or the soil sample, but not both, no ratio was developed for that sample location. However, an exception was made if a chemical was detected in either soil or tissue, and there were no other tissue-soil pairs for a given chemical among other sample locations upon which to develop uptake factors. In these situations, half the reporting limit was used as the surrogate concentration for whichever media had the non-detected result (i.e., tissue or soil). This approach may introduce some uncertainty to the development of the uptake factors for the following chemicals that it was applied to because the actual concentration in tissue or soil may be higher or lower than the surrogate value. The inclusion of non-detect data was used to develop uptake factors for the following chemicals: 4,4'-DDE (three sample pairs: two non-detect for tissue, one non-detect for soil), 4,4'-DDT (three sample pairs: one non-detect for tissue, two non-detect for soil), endrin (three sample pairs: one non-detect for tissue, two non-detect for soil), and Aroclor 1254 (two sample pairs: both non-detect for soil).

Arithmetic and geometric means were then calculated for all ratios for a given chemical. The arithmetic mean (i.e., the higher of the two means) was used as the soil-to-small mammal uptake factor for a chemical for the Tier 1 food chain model, and the geometric mean was used for the Tier 2 food chain model (see Section 7.0 of the main report).

A summary of the results of the uptake factor calculations are provided in **Table D-2**. The paired tissue and soil concentrations for all evaluated chemicals are provided in **Table D-3**. All Tier 1 and Tier 2 uptake factors are below 2. The soil-to-small mammal uptake factors were highest for the pesticides (i.e., 4,4-DDE, 4,4'-DDT, endrin) and PCBs (i.e., Aroclor 1254). It is noted that these are the same chemicals that were developed using non-detect tissue or soil data (see above). The uptake factors for the shrew (MAM-GP150-TIS/SS) were comparable to those for the hispid cotton rats. Of the ten chemicals for which shrew uptake factors were developed, only two (iron and mercury) were slightly higher than the average (Tier 1) uptake factors calculated for the shrew and the hispid cotton rat combined data set. This finding suggests that a shrew's more insectivorous diet does not result in overall greater BAFs compared with the BAFs of more herbivorous rodents. However, the fact that only one Shaw specimen was analyzed prohibits any definitive conclusions from being made.

D.2.5 Comparison of Site-Specific BAFs with Literature Values

A comparison of the site-specific BAFs with readily available literature values from Sample et al. (1998) is presented in the following text table.

Chemical	Literature BAF (Mean)	Site-Specific BAF (Arithmetic Mean) (Tier 1)
Aluminum	Not Available	8.66E-03
Barium	6.96E-02	3.31E-02
Cadmium	1.99E+00	9.22E-01
Copper	4.20E-01	1.49E-01
Iron	1.37E-02	2.07E-03
Lead	1.62E-01	1.33E-02
Manganese	Not Available	9.57E-03
Mercury	1.24E-01	1.03E-01
Nickel	2.80E-01	1.01E-01
Selenium	3.46E-01	1.95E-01
Vanadium	Not Available	5.92E-03
Zinc	1.34E+00	4.51E-01
TCDD (TEQ Total)	1.07E+00	6.09E-02
4,4'-DDE	Not Available	9.94E-01
4,4'-DDT	Not Available	1.66E+00
Endrin	Not Available	1.22E+00
Aroclor 1254	Not Available	1.06E+00
Aroclor 1260	Not Available	1.92E+00

Site-specific BAFs were lower than literature values for all chemicals for which both types of BAFs were available. This comparison suggests that one or more factors present in situ (e.g., reduced bioavailability in natural systems) at LHAAP serve to reduce the uptake of chemicals into mammalian organisms, resulting in lower body burdens than would be estimated using literature values.

D.3 Use of Uptake Factors in the Installation-Wide Ecological Risk Assessment

The site-specific uptake factors presented in this appendix were used as the BAFs in the food chain models to determine the bioaccumulation of chemicals from soil to small mammals. Site-specific BAFs were developed for 12 inorganic chemicals and six organic chemicals. When a site-specific small mammal BAF was not available for an inorganic COPEC, the average and geometric mean of all available inorganic BAFs was used as a surrogate for the Tier 1 and Tier 2 iterations of the food chain model, respectively. This approach is analogous to that used in other guidance (e.g., EPA, 1999). A similar approach was used for organic chemicals. Using the average BAF as a surrogate for all other organic COPEC BAFs is not likely to underestimate uptake for these chemicals. The tendency of a chemical to bioaccumulate is positively associated with its lipophilicity, which is reflected by its log octanol-water partition coefficient (Kow) value. The log Kow range for the six organic chemicals for which site-specific BAFs were developed was 5.45 (endrin) to 8.27 (Aroclor 1260). It is noted that the log Kow range for the organic chemicals for which site-specific BAFs were developed are at the upper end of the spectrum of log Kow values for any known environmental contaminants, and include some of the most bioaccumulative chemicals known to exist (e.g., dioxin, PCBs). Thus, using the average BAFs of these organic compounds as a surrogate for other organics (e.g., nitroaromatics) is considered appropriately conservative.

A description of the food chain models is presented in Section 7.0 of the main report.

D.4 References

Jacobs, 2001, *Final Ecological Risk Assessment, A Supplement to the Remedial Investigation Report Site 16 Landfill, Longhorn Army Ammunition Plant, Karnack, Texas*, Oak Ridge, TN.

Jacobs, 2002, *Final Baseline Human Health and Screening Ecological Risk Assessment Report for the Group 2 Sites, Longhorn Army Ammunition Plant, Karnack, Texas*, Oak Ridge, TN.

Jacobs, 2003, *Final Baseline Human Health and Screening Ecological Risk Assessment Report for the Group 4 Sites, Longhorn Army Ammunition Plant, Karnack, Texas*, Oak Ridge, TN.

Sample, B.E., Beauchamp, J.J. Efroymson, R.A. and Suter II, G.W., 1998, *Development and Validation of Bioaccumulation Models for Small Mammals*, Lockheed Martin Energy Systems, Inc. ES/ER/TIM-219.

U.S. Army Center for Health Promotion and Protective Medicine (USACHPPM), 2006, *Longhorn Army Ammunition Plant Rodent Sperm Analysis Report*, Report No. 39-DA-0107-04, MCHB-TS-REH, January.

U.S. Environmental Protection Agency (USEPA), 1999, Screening Level Ecological Risk Assessment Protocol for Hazardous Waste Combustion Facilities, Office of Solid Waste, USEPA Region 6 Multimedia Planning and Permitting Division, Center for Combustion Science and Engineering.

Table D-1
Sample Summary
Small Mammal Uptake Factor Study

Location	Sample No [a]	Collection Date	Depth (ft bgs)	Analyses
Soil and Tissue Samples				
MAM-CA518-SS	MAM-CA518-SS	24-Feb-04	0 - 0.5	Dioxins/Furans, Exp, Gen Chem, Metals, PAH, Pest/PCB, Perchlorate
MAM-CA518-SS	MAM-CA518-TIS	22-Jan-04	NA	Dioxins/Furans, Lipids, Metals, Pest/PCB, SVOC
MAM-CA562-SS	MAM-CA562-SS	24-Feb-04	0 - 0.5	Dioxins/Furans, Exp, Gen Chem, Metals, PAH, Pest/PCB, Perchlorate
MAM-CA562-SS	MAM-CA562-TIS	22-Jan-04	NA	Dioxins/Furans, Lipids, Metals, Pest/PCB, SVOC
MAM-CA586-SS	MAM-CA586-SS	24-Feb-04	0 - 0.5	Dioxins/Furans, Exp, Gen Chem, Metals, PAH, Pest/PCB, Perchlorate
MAM-CA586-SS	MAM-CA586-TIS	22-Jan-04	NA	Dioxins/Furans, Lipids, Metals, Pest/PCB, SVOC
MAM-CA958-SS	MAM-CA958-SS	24-Feb-04	0 - 0.5	Dioxins/Furans, Exp, Gen Chem, Metals, PAH, Pest/PCB, Perchlorate
MAM-CA958-SS	MAM-CA958-TIS	27-Jan-04	NA	Dioxins/Furans, Lipids, Metals, Pest/PCB, SVOC
MAM-CA966-SS	MAM-CA966-SS	24-Feb-04	0 - 0.5	Dioxins/Furans, Exp, Gen Chem, Metals, PAH, Pest/PCB, Perchlorate
MAM-CA966-SS	MAM-CA966-TIS	26-Jan-04	NA	Dioxins/Furans, Lipids, Metals, Pest/PCB, SVOC
MAM-CA990-SS	MAM-CA990-SS	24-Feb-04	0 - 0.5	Dioxins/Furans, Exp, Gen Chem, Metals, PAH, Pest/PCB, Perchlorate
MAM-CA990-SS	MAM-CA990-TIS	28-Jan-04	NA	Dioxins/Furans, Lipids, Metals, Pest/PCB, SVOC
MAM-GP150-SS	MAM-GP150-SS	25-Feb-04	0 - 0.5	Dioxins/Furans, Exp, Gen Chem, Metals, PAH, Pest/PCB, Perchlorate
MAM-GP150-SS	MAM-GP150-TIS	17-Jan-04	NA	Lipids, Metals
MAM-P2212-SS	MAM-P2212-SS	25-Feb-04	0 - 0.5	Dioxins/Furans, Exp, Gen Chem, Metals, PAH, Pest/PCB, Perchlorate
MAM-P2212-SS	MAM-P2212-TIS	25-Jan-04	NA	Dioxins/Furans, Lipids, Metals, Pest/PCB, SVOC
MAM-P2237-SS	MAM-P2237-SS	25-Feb-04	0 - 0.5	Dioxins/Furans, Exp, Gen Chem, Metals, PAH, Pest/PCB, Perchlorate
MAM-P2237-SS	MAM-P2237-TIS	23-Jan-04	NA	Dioxins/Furans, Lipids, Metals, Pest/PCB, SVOC
MAM-P2268-SS	MAM-P2268-SS	25-Feb-04	0 - 0.5	Dioxins/Furans, Exp, Gen Chem, Metals, PAH, Pest/PCB, Perchlorate
MAM-P2268-SS	MAM-P2268-TIS	24-Jan-04	NA	Dioxins/Furans, Lipids, Metals, Pest/PCB, SVOC
MAM-P2544-SS	MAM-P2544-SS	25-Feb-04	0 - 0.5	Dioxins/Furans, Exp, Gen Chem, Metals, PAH, Pest/PCB
MAM-P2544-SS	MAM-P2544-TIS	26-Jan-04	NA	Dioxins/Furans, Lipids, Metals, Pest/PCB, SVOC
MAM-P2571-SS	MAM-P2571-SS	25-Feb-04	0 - 0.5	Dioxins/Furans, Exp, Gen Chem, Metals, PAH, Pest/PCB, Perchlorate
MAM-P2571-SS	MAM-P2571-TIS	28-Jan-04	NA	Dioxins/Furans, Lipids, Metals, Pest/PCB, SVOC
MAM-P2586-SS	MAM-P2586-SS	25-Feb-04	0 - 0.5	Dioxins/Furans, Exp, Gen Chem, Metals, PAH, Pest/PCB, Perchlorate
MAM-P2586-SS	MAM-P2586-TIS	26-Jan-04	NA	Dioxins/Furans, Lipids, Metals, Pest/PCB, SVOC
MAM-W220-SS	MAM-W220-SS [b]	24-Feb-04	0 - 0.5	Dioxins/Furans, Exp, Gen Chem, Metals, PAH, Pest/PCB, Perchlorate
MAM-W220-SS	MAM-W220-TIS	22-Jan-04	NA	Dioxins/Furans, Lipids, Metals, Pest/PCB, SVOC
MAM-W230-SS	MAM-W230-TIS	23-Jan-04	NA	Dioxins/Furans, Lipids, Metals, Pest/PCB, SVOC
MAM-W250-SS	MAM-W250-SS	24-Feb-04	0 - 0.5	Dioxins/Furans, Exp, Gen Chem, Metals, PAH, Pest/PCB, Perchlorate
MAM-W250-SS	MAM-W250-TIS	23-Jan-04	NA	Dioxins/Furans, Lipids, Metals, Pest/PCB, SVOC
Samples Excluded [a]				
MAM-P2571-SS	MAM-P2571-SS-QC	25-Feb-04	0 - 0.5	Dioxins/Furans, Exp, Gen Chem, Metals, PAH, Pest/PCB, Perchlorate
MAM-W220-SS	MAM-W220-SS-QC	24-Feb-04	0 - 0.5	Dioxins/Furans, Exp, Gen Chem, Metals, PAH, Pest/PCB, Perchlorate

Notes and Abbreviations:

[a] Field duplicates are indicated by the addition of "QC" and were not included in the development of site-specific uptake factors.

[b] Location MAM-W220-SS was essentially co-located (< 20 feet apart) with MAM-W230-SS. Therefore, MAM-W220-SS soil data were paired with both MAM-W220-MAM and MAM-W230-MAM tissue data for the development of uptake factors.

General Chem = General chemistry; parameters include: bromide, chloride, cyanide, fluoride, nitrate, nitrite, sulfate, pH, and total organic carbon.

PAH Polynuclear aromatic hydrocarbon
Pest Pesticides
PCB Polychlorinated biphenyl
SVOC Semivolatile organic compounds
ft bgs feet below ground surface

Table D-2

Ratios [a] Used for the Development of Soil-to-Small Mammal Uptake Factors

Chemical	MAM-CA518-SS Hispid Cotton Rat	MAM-CA562-SS Hispid Cotton Rat	MAM-CA586-SS Hispid Cotton Rat	MAM-CA958-SS Hispid Cotton Rat	MAM-CA966-SS Hispid Cotton Rat	MAM-CA990-SS Hispid Cotton Rat	MAM-GP150-SS Shrew	MAM-P2212-SS Hispid Cotton Rat	MAM-P2237-SS Hispid Cotton Rat	MAM-P2268-SS Hispid Cotton Rat
Aluminum	1.28E-02	---	3.69E-03	---	9.08E-03	9.88E-03	---	1.71E-02	---	1.29E-02
Barium	2.25E-02	7.24E-02	3.87E-02	3.26E-02	3.35E-02	1.76E-01	2.20E-02	1.49E-02	3.85E-02	9.92E-03
Cadmium	---	---	---	---	---	---	---	---	1.39E-01	8.50E-01
Copper	1.85E-01	2.07E-01	3.04E-01	3.50E-01	3.64E-01	4.12E-01	4.33E-02	8.21E-02	3.02E-02	8.59E-02
Iron	1.79E-03	5.36E-03	6.78E-04	1.89E-03	2.84E-03	4.41E-03	3.04E-03	2.03E-03	1.44E-03	1.08E-03
Lead	2.57E-02	1.91E-02	4.31E-03	2.02E-02	2.35E-02	2.24E-02	1.19E-02	8.51E-03	4.30E-03	9.76E-03
Manganese	7.65E-03	4.74E-03	4.19E-03	1.67E-02	1.88E-02	3.07E-03	1.85E-03	1.47E-02	1.37E-02	1.10E-02
Mercury	1.15E-01	1.35E-01	1.20E-01	1.40E-01	1.37E-01	1.38E-01	1.70E-01	9.03E-02	8.06E-02	8.38E-02
Nickel	1.48E-01	1.38E-01	9.65E-02	1.89E-01	1.96E-01	2.17E-01	4.63E-02	7.35E-02	8.13E-02	3.79E-02
Selenium	2.95E-01	7.23E-01	4.85E-02	1.86E-01	2.69E-01	3.81E-01	1.57E-01	7.37E-02	7.82E-02	7.25E-02
Vanadium	8.26E-03	5.73E-03	2.15E-03	6.93E-03	7.63E-03	1.16E-02	5.65E-03	8.43E-03	6.27E-03	2.87E-03
Zinc	1.10E-01	1.45E+00	1.49E+00	4.07E-01	4.63E-01	1.21E+00	1.27E-01	1.93E-01	6.06E-02	2.30E-01
TCDD (TEQ Total)	3.44E-02	5.16E-02	5.26E-02	4.74E-02	3.55E-02	4.31E-02	---	4.00E-02	2.51E-02	5.22E-02
4,4'-DDE	---	---	---	---	---	---	---	---	1.30E+00	1.09E+00
4,4'-DDT	---	---	---	---	---	---	---	---	1.64E-01	---
Endrin	---	---	1.12E+00	---	---	---	---	---	---	---
Aroclor 1254	---	---	---	---	---	---	---	---	1.24E-01	2.00E+00
Aroclor 1260	---	---	---	---	---	---	---	---	---	---

Notes are provided on last page

Table D-2

Ratios [a] Used for the Development of Soil-to-Small Mammal Uptake Factors

Chemical	MAM-P2544-SS Hispid Cotton Rat	MAM-P2571-SS Hispid Cotton Rat	MAM-P2586-SS Hispid Cotton Rat	MAM-W220-SS Hispid Cotton Rat	MAM-W230-SS Hispid Cotton Rat	MAM-W250-SS Hispid Cotton Rat	Arithmetic Mean (Tier 1)	Geometric Mean (Tier 2)
Aluminum	2.16E-03	2.26E-03	1.73E-02	2.41E-03	5.69E-03	---	8.66E-03	6.63E-03
Barium	3.16E-02	9.99E-03	1.26E-02	5.48E-03	4.52E-03	4.40E-03	3.31E-02	2.00E-02
Cadmium	---	---	---	1.76E+00	1.39E+00	4.75E-01	9.22E-01	6.72E-01
Copper	9.61E-02	3.79E-03	8.95E-02	5.42E-02	4.31E-02	4.12E-02	1.49E-01	8.97E-02
Iron	2.14E-03	1.26E-03	1.54E-03	1.93E-03	8.38E-04	8.42E-04	2.07E-03	1.76E-03
Lead	1.39E-02	1.25E-02	8.63E-03	1.12E-02	8.91E-03	7.92E-03	1.33E-02	1.16E-02
Manganese	1.61E-02	8.86E-03	1.19E-02	1.43E-02	2.70E-03	3.07E-03	9.57E-03	7.58E-03
Mercury	1.06E-01	1.13E-01	1.22E-01	3.72E-02	3.48E-02	2.50E-02	1.03E-01	9.15E-02
Nickel	9.22E-02	6.07E-02	8.44E-02	6.21E-02	5.00E-02	4.47E-02	1.01E-01	8.71E-02
Selenium	1.10E-01	7.86E-02	1.55E-01	2.00E-01	1.59E-01	1.32E-01	1.95E-01	1.51E-01
Vanadium	3.98E-03	5.05E-03	4.59E-03	6.17E-03	4.87E-03	4.50E-03	5.92E-03	5.49E-03
Zinc	1.21E+00	1.43E-02	1.16E-01	8.65E-02	3.07E-02	1.78E-02	4.51E-01	1.84E-01
TCDD (TEQ Total)	3.89E-02	2.14E-01	1.17E-02	1.65E-01	6.82E-02	3.37E-02	6.09E-02	4.73E-02
4,4'-DDE	---	5.88E-01	---	---	---	---	9.94E-01	9.42E-01
4,4'-DDT	---	---	---	1.16E+00	---	3.66E+00	1.66E+00	8.87E-01
Endrin	---	---	---	1.21E+00	---	1.32E+00	1.22E+00	1.21E+00
Aroclor 1254	---	---	---	---	---	---	1.06E+00	4.98E-01
Aroclor 1260	---	---	---	3.33E+00	1.47E+00	9.50E-01	1.92E+00	1.67E+00

Notes and Abbreviations:

[a] Ratios were calculated by dividing the detected concentration in tissue by the detected concentration in surface soil (0-0.5 feet).
The arithmetic and geometric means of the ratios were used as the Tier 1 and Tier 2 soil-to-small mammal uptake factors, respectively.

--- = Ratios were not calculated for a sample location if the chemical was not detected in the tissue or soil media, with the exception of the shaded cells, which were calculated using surrogate values for non-detects in either soil or tissue (see text for details).

Table D-3
Derivation of Bioaccumulation Factors (BAF) from Soil/Mammal Tissue Pairs

ALUMINUM

Chemical	Result	Validation Qualifier	Units	Location	Sample #	Matrix
Aluminum	3400	JL	mg/kg	MAM-CA518-SS	MAM-CA518-SS	Soil
Aluminum	43.4		mg/kg	MAM-CA518-SS	MAM-CA518-TIS	Tissue
BAF =	0.0127647					
Aluminum	5180	JL	mg/kg	MAM-CA586-SS	MAM-CA586-SS	Soil
Aluminum	19.1		mg/kg	MAM-CA586-SS	MAM-CA586-TIS	Tissue
BAF =	0.0036873					
Aluminum	2710	JL	mg/kg	MAM-CA966-SS	MAM-CA966-SS	Soil
Aluminum	24.6		mg/kg	MAM-CA966-SS	MAM-CA966-TIS	Tissue
BAF =	0.0090775					
Aluminum	1730	JL	mg/kg	MAM-CA990-SS	MAM-CA990-SS	Soil
Aluminum	17.1	J	mg/kg	MAM-CA990-SS	MAM-CA990-TIS	Tissue
BAF =	0.0098844					
Aluminum	5680		mg/kg	MAM-P2212-SS	MAM-P2212-SS	Soil
Aluminum	96.9		mg/kg	MAM-P2212-SS	MAM-P2212-TIS	Tissue
BAF =	0.0170599					
Aluminum	7590		mg/kg	MAM-P2268-SS	MAM-P2268-SS	Soil
Aluminum	98.2		mg/kg	MAM-P2268-SS	MAM-P2268-TIS	Tissue
BAF =	0.0129381					
Aluminum	6290		mg/kg	MAM-P2544-SS	MAM-P2544-SS	Soil
Aluminum	13.6	J	mg/kg	MAM-P2544-SS	MAM-P2544-TIS	Tissue
BAF =	0.0021622					
Aluminum	6630		mg/kg	MAM-P2571-SS	MAM-P2571-SS	Soil
Aluminum	15	J	mg/kg	MAM-P2571-SS	MAM-P2571-TIS	Tissue
BAF =	0.0022624					
Aluminum	5840		mg/kg	MAM-P2586-SS	MAM-P2586-SS	Soil
Aluminum	101		mg/kg	MAM-P2586-SS	MAM-P2586-TIS	Tissue
BAF =	0.0172945					
Aluminum	6770	JL	mg/kg	MAM-W220-SS	MAM-W220-SS	Soil
Aluminum	16.3	J	mg/kg	MAM-W220-SS	MAM-W220-TIS	Tissue
BAF =	0.0024077					
Aluminum	6770	JL	mg/kg	MAM-W220-SS	MAM-W220-SS	Soil
Aluminum	38.5		mg/kg	MAM-W230-SS	MAM-W230-TIS	Tissue
BAF =	0.0056869					
Sample Size =	**11**					
BAF Arithmetic Mean =	**0.0086569**					
BAF Geometric Mean =	**0.0066254**					

Table D-3
Derivation of Bioaccumulation Factors (BAF) from Soil/Mammal Tissue Pairs

BARIUM

Chemical	Result	Validation Qualifier	Units	Location	Sample #	Matrix
Barium	37.8	J	mg/kg	MAM-CA518-SS	MAM-CA518-SS	Soil
Barium	0.85	U	mg/kg	MAM-CA518-SS	MAM-CA518-TIS	Tissue
BAF =	0.0224868					
Barium	35.9	J	mg/kg	MAM-CA562-SS	MAM-CA562-SS	Soil
Barium	2.6	J	mg/kg	MAM-CA562-SS	MAM-CA562-TIS	Tissue
BAF =	0.0724234					
Barium	77.5	J	mg/kg	MAM-CA586-SS	MAM-CA586-SS	Soil
Barium	3	J	mg/kg	MAM-CA586-SS	MAM-CA586-TIS	Tissue
BAF =	0.0387097					
Barium	26.1	J	mg/kg	MAM-CA958-SS	MAM-CA958-SS	Soil
Barium	0.85	U	mg/kg	MAM-CA958-SS	MAM-CA958-TIS	Tissue
BAF =	0.032567					
Barium	26.9	J	mg/kg	MAM-CA966-SS	MAM-CA966-SS	Soil
Barium	0.9	U	mg/kg	MAM-CA966-SS	MAM-CA966-TIS	Tissue
BAF =	0.0334572					
Barium	32.3	J	mg/kg	MAM-CA990-SS	MAM-CA990-SS	Soil
Barium	5.7	J	mg/kg	MAM-CA990-SS	MAM-CA990-TIS	Tissue
BAF =	0.1764706					
Barium	109	J	mg/kg	MAM-GP150-SS	MAM-GP150-SS	Soil
Barium	2.4	J	mg/kg	MAM-GP150-SS	MAM-GP150-TIS	Tissue
BAF =	0.0220183					
Barium	46.9	J	mg/kg	MAM-P2212-SS	MAM-P2212-SS	Soil
Barium	0.7	U	mg/kg	MAM-P2212-SS	MAM-P2212-TIS	Tissue
BAF =	0.0149254					
Barium	49.3	J	mg/kg	MAM-P2237-SS	MAM-P2237-SS	Soil
Barium	1.9	J	mg/kg	MAM-P2237-SS	MAM-P2237-TIS	Tissue
BAF =	0.0385396					
Barium	75.6	J	mg/kg	MAM-P2268-SS	MAM-P2268-SS	Soil
Barium	0.75	U	mg/kg	MAM-P2268-SS	MAM-P2268-TIS	Tissue
BAF =	0.0099206					
Barium	60.1	J	mg/kg	MAM-P2544-SS	MAM-P2544-SS	Soil
Barium	1.9	J	mg/kg	MAM-P2544-SS	MAM-P2544-TIS	Tissue
BAF =	0.031614					
Barium	85.1	J	mg/kg	MAM-P2571-SS	MAM-P2571-SS	Soil
Barium	0.85	U	mg/kg	MAM-P2571-SS	MAM-P2571-TIS	Tissue
BAF =	0.0099882					
Barium	59.7	J	mg/kg	MAM-P2586-SS	MAM-P2586-SS	Soil
Barium	0.75	U	mg/kg	MAM-P2586-SS	MAM-P2586-TIS	Tissue
BAF =	0.0125628					
Barium	155	J	mg/kg	MAM-W220-SS	MAM-W220-SS	Soil
Barium	0.85	U	mg/kg	MAM-W220-SS	MAM-W220-TIS	Tissue
BAF =	0.0054839					
Barium	155	J	mg/kg	MAM-W220-SS	MAM-W220-SS	Soil
Barium	0.7	U	mg/kg	MAM-W230-SS	MAM-W230-TIS	Tissue
BAF =	0.0045161					
Barium	193	J	mg/kg	MAM-W250-SS	MAM-W250-SS	Soil
Barium	0.85	U	mg/kg	MAM-W250-SS	MAM-W250-TIS	Tissue
BAF =	0.0044041					
Sample Size =	**16**					
BAF Arithmetic Mean =	**0.0331305**					
BAF Geometric Mean =	**0.0200069**					

Table D-3
Derivation of Bioaccumulation Factors (BAF) from Soil/Mammal Tissue Pairs

CADMIUM

Chemical	Result	Validation Qualifier	Units	Location	Sample #	Matrix
Cadmium	0.61		mg/kg	MAM-P2237-SS	MAM-P2237-SS	Soil
Cadmium	0.085	U	mg/kg	MAM-P2237-SS	MAM-P2237-TIS	Tissue
BAF =	0.1393443					
Cadmium	0.1	J	mg/kg	MAM-P2268-SS	MAM-P2268-SS	Soil
Cadmium	0.085	U	mg/kg	MAM-P2268-SS	MAM-P2268-TIS	Tissue
BAF =	0.85					
Cadmium	0.054	J	mg/kg	MAM-W220-SS	MAM-W220-SS	Soil
Cadmium	0.095	U	mg/kg	MAM-W220-SS	MAM-W220-TIS	Tissue
BAF =	1.7592593					
Cadmium	0.054	J	mg/kg	MAM-W220-SS	MAM-W220-SS	Soil
Cadmium	0.075	U	mg/kg	MAM-W230-SS	MAM-W230-TIS	Tissue
BAF =	1.3888889					
Cadmium	0.2	J	mg/kg	MAM-W250-SS	MAM-W250-SS	Soil
Cadmium	0.095	U	mg/kg	MAM-W250-SS	MAM-W250-TIS	Tissue
BAF =	0.475					
Sample Size =	**n = 5**					
BAF Arithmetic Mean =	**0.9224985**					
BAF Geometric Mean =	**0.6724187**					

Table D-3
Derivation of Bioaccumulation Factors (BAF) from Soil/Mammal Tissue Pairs

COPPER

Chemical	Result	Validation Qualifier	Units	Location	Sample #	Matrix
Copper	2	J	mg/kg	MAM-CA518-SS	MAM-CA518-SS	Soil
Copper	0.37	U	mg/kg	MAM-CA518-SS	MAM-CA518-TIS	Tissue
BAF =	0.185					
Copper	1.5	J	mg/kg	MAM-CA562-SS	MAM-CA562-SS	Soil
Copper	0.31	U	mg/kg	MAM-CA562-SS	MAM-CA562-TIS	Tissue
BAF =	0.2066667					
Copper	1.2	J	mg/kg	MAM-CA586-SS	MAM-CA586-SS	Soil
Copper	0.365	U	mg/kg	MAM-CA586-SS	MAM-CA586-TIS	Tissue
BAF =	0.3041667					
Copper	1.1	J	mg/kg	MAM-CA958-SS	MAM-CA958-SS	Soil
Copper	0.385	U	mg/kg	MAM-CA958-SS	MAM-CA958-TIS	Tissue
BAF =	0.35					
Copper	1.1	J	mg/kg	MAM-CA966-SS	MAM-CA966-SS	Soil
Copper	0.4	U	mg/kg	MAM-CA966-SS	MAM-CA966-TIS	Tissue
BAF =	0.3636364					
Copper	0.85	J	mg/kg	MAM-CA990-SS	MAM-CA990-SS	Soil
Copper	0.35	U	mg/kg	MAM-CA990-SS	MAM-CA990-TIS	Tissue
BAF =	0.4117647					
Copper	9	J	mg/kg	MAM-GP150-SS	MAM-GP150-SS	Soil
Copper	0.39	U	mg/kg	MAM-GP150-SS	MAM-GP150-TIS	Tissue
BAF =	0.0433333					
Copper	3.9	J	mg/kg	MAM-P2212-SS	MAM-P2212-SS	Soil
Copper	0.32	U	mg/kg	MAM-P2212-SS	MAM-P2212-TIS	Tissue
BAF =	0.0820513					
Copper	11.6	J	mg/kg	MAM-P2237-SS	MAM-P2237-SS	Soil
Copper	0.35	U	mg/kg	MAM-P2237-SS	MAM-P2237-TIS	Tissue
BAF =	0.0301724					
Copper	3.9	J	mg/kg	MAM-P2268-SS	MAM-P2268-SS	Soil
Copper	0.335	U	mg/kg	MAM-P2268-SS	MAM-P2268-TIS	Tissue
BAF =	0.0858974					
Copper	3.8	J	mg/kg	MAM-P2544-SS	MAM-P2544-SS	Soil
Copper	0.365	U	mg/kg	MAM-P2544-SS	MAM-P2544-TIS	Tissue
BAF =	0.0960526					
Copper	98.9	J	mg/kg	MAM-P2571-SS	MAM-P2571-SS	Soil
Copper	0.375	U	mg/kg	MAM-P2571-SS	MAM-P2571-TIS	Tissue
BAF =	0.0037917					
Copper	3.8	J	mg/kg	MAM-P2586-SS	MAM-P2586-SS	Soil
Copper	0.34	U	mg/kg	MAM-P2586-SS	MAM-P2586-TIS	Tissue
BAF =	0.0894737					
Copper	7.2		mg/kg	MAM-W220-SS	MAM-W220-SS	Soil
Copper	0.39	U	mg/kg	MAM-W220-SS	MAM-W220-TIS	Tissue
BAF =	0.0541667					
Copper	7.2		mg/kg	MAM-W220-SS	MAM-W220-SS	Soil
Copper	0.31	U	mg/kg	MAM-W230-SS	MAM-W230-TIS	Tissue
BAF =	0.0430556					
Copper	9.1		mg/kg	MAM-W250-SS	MAM-W250-SS	Soil
Copper	0.375	U	mg/kg	MAM-W250-SS	MAM-W250-TIS	Tissue
BAF =	0.0412088					
Sample Size =	16					
BAF Arithmetic Mean =	0.1494024					
BAF Geometric Mean =	0.0897071					

Table D-3
Derivation of Bioaccumulation Factors (BAF) from Soil/Mammal Tissue Pairs

IRON

Chemical	Result	Validation Qualifier	Units	Location	Sample #	Matrix
Iron	5530	J	mg/kg	MAM-CA518-SS	MAM-CA518-SS	Soil
Iron	9.9		mg/kg	MAM-CA518-SS	MAM-CA518-TIS	Tissue
BAF =	0.0017902					
Iron	6460	J	mg/kg	MAM-CA562-SS	MAM-CA562-SS	Soil
Iron	34.6		mg/kg	MAM-CA562-SS	MAM-CA562-TIS	Tissue
BAF =	0.005356					
Iron	31400	J	mg/kg	MAM-CA586-SS	MAM-CA586-SS	Soil
Iron	21.3		mg/kg	MAM-CA586-SS	MAM-CA586-TIS	Tissue
BAF =	0.0006783					
Iron	6730	J	mg/kg	MAM-CA958-SS	MAM-CA958-SS	Soil
Iron	12.7		mg/kg	MAM-CA958-SS	MAM-CA958-TIS	Tissue
BAF =	0.0018871					
Iron	5210	J	mg/kg	MAM-CA966-SS	MAM-CA966-SS	Soil
Iron	14.8		mg/kg	MAM-CA966-SS	MAM-CA966-TIS	Tissue
BAF =	0.0028407					
Iron	2900	J	mg/kg	MAM-CA990-SS	MAM-CA990-SS	Soil
Iron	12.8		mg/kg	MAM-CA990-SS	MAM-CA990-TIS	Tissue
BAF =	0.0044138					
Iron	10800		mg/kg	MAM-GP150-SS	MAM-GP150-SS	Soil
Iron	32.8		mg/kg	MAM-GP150-SS	MAM-GP150-TIS	Tissue
BAF =	0.003037					
Iron	17600		mg/kg	MAM-P2212-SS	MAM-P2212-SS	Soil
Iron	35.7		mg/kg	MAM-P2212-SS	MAM-P2212-TIS	Tissue
BAF =	0.0020284					
Iron	20300		mg/kg	MAM-P2237-SS	MAM-P2237-SS	Soil
Iron	29.3		mg/kg	MAM-P2237-SS	MAM-P2237-TIS	Tissue
BAF =	0.0014433					
Iron	18800		mg/kg	MAM-P2268-SS	MAM-P2268-SS	Soil
Iron	20.3		mg/kg	MAM-P2268-SS	MAM-P2268-TIS	Tissue
BAF =	0.0010798					
Iron	13300		mg/kg	MAM-P2544-SS	MAM-P2544-SS	Soil
Iron	28.4		mg/kg	MAM-P2544-SS	MAM-P2544-TIS	Tissue
BAF =	0.0021353					
Iron	19300		mg/kg	MAM-P2571-SS	MAM-P2571-SS	Soil
Iron	24.4		mg/kg	MAM-P2571-SS	MAM-P2571-TIS	Tissue
BAF =	0.0012642					
Iron	9770		mg/kg	MAM-P2586-SS	MAM-P2586-SS	Soil
Iron	15		mg/kg	MAM-P2586-SS	MAM-P2586-TIS	Tissue
BAF =	0.0015353					
Iron	9070	J	mg/kg	MAM-W220-SS	MAM-W220-SS	Soil
Iron	17.5		mg/kg	MAM-W220-SS	MAM-W220-TIS	Tissue
BAF =	0.0019294					
Iron	9070	J	mg/kg	MAM-W220-SS	MAM-W220-SS	Soil
Iron	7.6	J	mg/kg	MAM-W230-SS	MAM-W230-TIS	Tissue
BAF =	0.0008379					
Iron	11400	J	mg/kg	MAM-W250-SS	MAM-W250-SS	Soil
Iron	9.6		mg/kg	MAM-W250-SS	MAM-W250-TIS	Tissue
BAF =	0.0008421					
Sample Size =	16					
BAF Arithmetic Mean =	0.0020687					
BAF Geometric Mean =	0.0017582					

Table D-3
Derivation of Bioaccumulation Factors (BAF) from Soil/Mammal Tissue Pairs

LEAD

Chemical	Result	Validation Qualifier	Units	Location	Sample #	Matrix
Lead	7.2	JL	mg/kg	MAM-CA518-SS	MAM-CA518-SS	Soil
Lead	0.185	U	mg/kg	MAM-CA518-SS	MAM-CA518-TIS	Tissue
BAF =	0.0256944					
Lead	8.1	JL	mg/kg	MAM-CA562-SS	MAM-CA562-SS	Soil
Lead	0.155	U	mg/kg	MAM-CA562-SS	MAM-CA562-TIS	Tissue
BAF =	0.0191358					
Lead	42.9	JL	mg/kg	MAM-CA586-SS	MAM-CA586-SS	Soil
Lead	0.185	U	mg/kg	MAM-CA586-SS	MAM-CA586-TIS	Tissue
BAF =	0.0043124					
Lead	9.4	JL	mg/kg	MAM-CA958-SS	MAM-CA958-SS	Soil
Lead	0.19	U	mg/kg	MAM-CA958-SS	MAM-CA958-TIS	Tissue
BAF =	0.0202128					
Lead	8.5	JL	mg/kg	MAM-CA966-SS	MAM-CA966-SS	Soil
Lead	0.2	U	mg/kg	MAM-CA966-SS	MAM-CA966-TIS	Tissue
BAF =	0.0235294					
Lead	7.8	JL	mg/kg	MAM-CA990-SS	MAM-CA990-SS	Soil
Lead	0.175	U	mg/kg	MAM-CA990-SS	MAM-CA990-TIS	Tissue
BAF =	0.0224359					
Lead	16.4		mg/kg	MAM-GP150-SS	MAM-GP150-SS	Soil
Lead	0.195	U	mg/kg	MAM-GP150-SS	MAM-GP150-TIS	Tissue
BAF =	0.0118902					
Lead	18.8		mg/kg	MAM-P2212-SS	MAM-P2212-SS	Soil
Lead	0.16	U	mg/kg	MAM-P2212-SS	MAM-P2212-TIS	Tissue
BAF =	0.0085106					
Lead	40.7		mg/kg	MAM-P2237-SS	MAM-P2237-SS	Soil
Lead	0.175	U	mg/kg	MAM-P2237-SS	MAM-P2237-TIS	Tissue
BAF =	0.0042998					
Lead	16.9		mg/kg	MAM-P2268-SS	MAM-P2268-SS	Soil
Lead	0.165	U	mg/kg	MAM-P2268-SS	MAM-P2268-TIS	Tissue
BAF =	0.0097633					
Lead	13.3		mg/kg	MAM-P2544-SS	MAM-P2544-SS	Soil
Lead	0.185	U	mg/kg	MAM-P2544-SS	MAM-P2544-TIS	Tissue
BAF =	0.0139098					
Lead	15.2		mg/kg	MAM-P2571-SS	MAM-P2571-SS	Soil
Lead	0.19	U	mg/kg	MAM-P2571-SS	MAM-P2571-TIS	Tissue
BAF =	0.0125					
Lead	19.7		mg/kg	MAM-P2586-SS	MAM-P2586-SS	Soil
Lead	0.17	U	mg/kg	MAM-P2586-SS	MAM-P2586-TIS	Tissue
BAF =	0.0086294					
Lead	17.4	JL	mg/kg	MAM-W220-SS	MAM-W220-SS	Soil
Lead	0.195	U	mg/kg	MAM-W220-SS	MAM-W220-TIS	Tissue
BAF =	0.0112069					
Lead	17.4	JL	mg/kg	MAM-W220-SS	MAM-W220-SS	Soil
Lead	0.155	U	mg/kg	MAM-W230-SS	MAM-W230-TIS	Tissue
BAF =	0.008908					
Lead	24	JL	mg/kg	MAM-W250-SS	MAM-W250-SS	Soil
Lead	0.19	U	mg/kg	MAM-W250-SS	MAM-W250-TIS	Tissue
BAF =	0.0079167					
Sample Size =	16					
BAF Arithmetic Mean =	0.0133035					
BAF Geometric Mean =	0.0116426					

Table D-3
Derivation of Bioaccumulation Factors (BAF) from Soil/Mammal Tissue Pairs

MANGANESE

Chemical	Result	Validation Qualifier	Units	Location	Sample #	Matrix
Manganese	170	J	mg/kg	MAM-CA518-SS	MAM-CA518-SS	Soil
Manganese	1.3	J	mg/kg	MAM-CA518-SS	MAM-CA518-TIS	Tissue
BAF =	0.0076471					
Manganese	232	J	mg/kg	MAM-CA562-SS	MAM-CA562-SS	Soil
Manganese	1.1	J	mg/kg	MAM-CA562-SS	MAM-CA562-TIS	Tissue
BAF =	0.0047414					
Manganese	978	J	mg/kg	MAM-CA586-SS	MAM-CA586-SS	Soil
Manganese	4.1		mg/kg	MAM-CA586-SS	MAM-CA586-TIS	Tissue
BAF =	0.0041922					
Manganese	120	J	mg/kg	MAM-CA958-SS	MAM-CA958-SS	Soil
Manganese	2	J	mg/kg	MAM-CA958-SS	MAM-CA958-TIS	Tissue
BAF =	0.0166667					
Manganese	128	J	mg/kg	MAM-CA966-SS	MAM-CA966-SS	Soil
Manganese	2.4	J	mg/kg	MAM-CA966-SS	MAM-CA966-TIS	Tissue
BAF =	0.01875					
Manganese	358	J	mg/kg	MAM-CA990-SS	MAM-CA990-SS	Soil
Manganese	1.1	J	mg/kg	MAM-CA990-SS	MAM-CA990-TIS	Tissue
BAF =	0.0030726					
Manganese	389		mg/kg	MAM-GP150-SS	MAM-GP150-SS	Soil
Manganese	0.72	J	mg/kg	MAM-GP150-SS	MAM-GP150-TIS	Tissue
BAF =	0.0018509					
Manganese	143		mg/kg	MAM-P2212-SS	MAM-P2212-SS	Soil
Manganese	2.1	J	mg/kg	MAM-P2212-SS	MAM-P2212-TIS	Tissue
BAF =	0.0146853					
Manganese	124		mg/kg	MAM-P2237-SS	MAM-P2237-SS	Soil
Manganese	1.7	J	mg/kg	MAM-P2237-SS	MAM-P2237-TIS	Tissue
BAF =	0.0137097					
Manganese	420		mg/kg	MAM-P2268-SS	MAM-P2268-SS	Soil
Manganese	4.6		mg/kg	MAM-P2268-SS	MAM-P2268-TIS	Tissue
BAF =	0.0109524					
Manganese	267		mg/kg	MAM-P2544-SS	MAM-P2544-SS	Soil
Manganese	4.3		mg/kg	MAM-P2544-SS	MAM-P2544-TIS	Tissue
BAF =	0.0161049					
Manganese	237		mg/kg	MAM-P2571-SS	MAM-P2571-SS	Soil
Manganese	2.1	J	mg/kg	MAM-P2571-SS	MAM-P2571-TIS	Tissue
BAF =	0.0088608					
Manganese	185		mg/kg	MAM-P2586-SS	MAM-P2586-SS	Soil
Manganese	2.2	J	mg/kg	MAM-P2586-SS	MAM-P2586-TIS	Tissue
BAF =	0.0118919					
Manganese	371	J	mg/kg	MAM-W220-SS	MAM-W220-SS	Soil
Manganese	5.3		mg/kg	MAM-W220-SS	MAM-W220-TIS	Tissue
BAF =	0.0142857					
Manganese	371	J	mg/kg	MAM-W220-SS	MAM-W220-SS	Soil
Manganese	1	J	mg/kg	MAM-W230-SS	MAM-W230-TIS	Tissue
BAF =	0.0026954					
Manganese	489	J	mg/kg	MAM-W250-SS	MAM-W250-SS	Soil
Manganese	1.5	J	mg/kg	MAM-W250-SS	MAM-W250-TIS	Tissue
BAF =	0.0030675					
Sample Size =	16					
BAF Arithmetic Mean =	0.0095734					
BAF Geometric Mean =	0.0075825					

Table D-3
Derivation of Bioaccumulation Factors (BAF) from Soil/Mammal Tissue Pairs

MERCURY

Chemical	Result	Validation Qualifier	Units	Location	Sample #	Matrix
Mercury	0.026	J	mg/kg	MAM-CA518-SS	MAM-CA518-SS	Soil
Mercury	0.003	U	mg/kg	MAM-CA518-SS	MAM-CA518-TIS	Tissue
BAF =	0.1153846					
Mercury	0.023	J	mg/kg	MAM-CA562-SS	MAM-CA562-SS	Soil
Mercury	0.0031	U	mg/kg	MAM-CA562-SS	MAM-CA562-TIS	Tissue
BAF =	0.1347826					
Mercury	0.025	J	mg/kg	MAM-CA586-SS	MAM-CA586-SS	Soil
Mercury	0.003	U	mg/kg	MAM-CA586-SS	MAM-CA586-TIS	Tissue
BAF =	0.12					
Mercury	0.02	J	mg/kg	MAM-CA958-SS	MAM-CA958-SS	Soil
Mercury	0.0028	U	mg/kg	MAM-CA958-SS	MAM-CA958-TIS	Tissue
BAF =	0.14					
Mercury	0.023	J	mg/kg	MAM-CA966-SS	MAM-CA966-SS	Soil
Mercury	0.00315	U	mg/kg	MAM-CA966-SS	MAM-CA966-TIS	Tissue
BAF =	0.1369565					
Mercury	0.021	J	mg/kg	MAM-CA990-SS	MAM-CA990-SS	Soil
Mercury	0.0029	U	mg/kg	MAM-CA990-SS	MAM-CA990-TIS	Tissue
BAF =	0.1380952					
Mercury	0.1	J	mg/kg	MAM-GP150-SS	MAM-GP150-SS	Soil
Mercury	0.017		mg/kg	MAM-GP150-SS	MAM-GP150-TIS	Tissue
BAF =	0.17					
Mercury	0.031	J	mg/kg	MAM-P2212-SS	MAM-P2212-SS	Soil
Mercury	0.0028	U	mg/kg	MAM-P2212-SS	MAM-P2212-TIS	Tissue
BAF =	0.0903226					
Mercury	0.036	J	mg/kg	MAM-P2237-SS	MAM-P2237-SS	Soil
Mercury	0.0029	U	mg/kg	MAM-P2237-SS	MAM-P2237-TIS	Tissue
BAF =	0.0805556					
Mercury	0.037	J	mg/kg	MAM-P2268-SS	MAM-P2268-SS	Soil
Mercury	0.0031	U	mg/kg	MAM-P2268-SS	MAM-P2268-TIS	Tissue
BAF =	0.0837838					
Mercury	0.027	J	mg/kg	MAM-P2544-SS	MAM-P2544-SS	Soil
Mercury	0.00285	U	mg/kg	MAM-P2544-SS	MAM-P2544-TIS	Tissue
BAF =	0.1055556					
Mercury	0.027	J	mg/kg	MAM-P2571-SS	MAM-P2571-SS	Soil
Mercury	0.00305	U	mg/kg	MAM-P2571-SS	MAM-P2571-TIS	Tissue
BAF =	0.112963					
Mercury	0.025	J	mg/kg	MAM-P2586-SS	MAM-P2586-SS	Soil
Mercury	0.00305	U	mg/kg	MAM-P2586-SS	MAM-P2586-TIS	Tissue
BAF =	0.122					
Mercury	0.082	J	mg/kg	MAM-W220-SS	MAM-W220-SS	Soil
Mercury	0.00305	U	mg/kg	MAM-W220-SS	MAM-W220-TIS	Tissue
BAF =	0.0371951					
Mercury	0.082	J	mg/kg	MAM-W220-SS	MAM-W220-SS	Soil
Mercury	0.00285	U	mg/kg	MAM-W230-SS	MAM-W230-TIS	Tissue
BAF =	0.0347561					
Mercury	0.12	J	mg/kg	MAM-W250-SS	MAM-W250-SS	Soil
Mercury	0.003	U	mg/kg	MAM-W250-SS	MAM-W250-TIS	Tissue
BAF =	0.025					
Sample Size =	16					
BAF Arithmetic Mean =	0.1029594					
BAF Geometric Mean =	0.0914849					

Table D-3
Derivation of Bioaccumulation Factors (BAF) from Soil/Mammal Tissue Pairs

NICKEL

Chemical	Result	Validation Qualifier	Units	Location	Sample #	Matrix
Nickel	2.8	J	mg/kg	MAM-CA518-SS	MAM-CA518-SS	Soil
Nickel	0.415	U	mg/kg	MAM-CA518-SS	MAM-CA518-TIS	Tissue
BAF =	0.1482143					
Nickel	2.5	J	mg/kg	MAM-CA562-SS	MAM-CA562-SS	Soil
Nickel	0.345	U	mg/kg	MAM-CA562-SS	MAM-CA562-TIS	Tissue
BAF =	0.138					
Nickel	4.3	J	mg/kg	MAM-CA586-SS	MAM-CA586-SS	Soil
Nickel	0.415	U	mg/kg	MAM-CA586-SS	MAM-CA586-TIS	Tissue
BAF =	0.0965116					
Nickel	2.3	J	mg/kg	MAM-CA958-SS	MAM-CA958-SS	Soil
Nickel	0.435	U	mg/kg	MAM-CA958-SS	MAM-CA958-TIS	Tissue
BAF =	0.1891304					
Nickel	2.3	J	mg/kg	MAM-CA966-SS	MAM-CA966-SS	Soil
Nickel	0.45	U	mg/kg	MAM-CA966-SS	MAM-CA966-TIS	Tissue
BAF =	0.1956522					
Nickel	1.8	J	mg/kg	MAM-CA990-SS	MAM-CA990-SS	Soil
Nickel	0.39	U	mg/kg	MAM-CA990-SS	MAM-CA990-TIS	Tissue
BAF =	0.2166667					
Nickel	9.5		mg/kg	MAM-GP150-SS	MAM-GP150-SS	Soil
Nickel	0.44	U	mg/kg	MAM-GP150-SS	MAM-GP150-TIS	Tissue
BAF =	0.0463158					
Nickel	4.9		mg/kg	MAM-P2212-SS	MAM-P2212-SS	Soil
Nickel	0.36	U	mg/kg	MAM-P2212-SS	MAM-P2212-TIS	Tissue
BAF =	0.0734694					
Nickel	4.8	J	mg/kg	MAM-P2237-SS	MAM-P2237-SS	Soil
Nickel	0.39	U	mg/kg	MAM-P2237-SS	MAM-P2237-TIS	Tissue
BAF =	0.08125					
Nickel	9.9		mg/kg	MAM-P2268-SS	MAM-P2268-SS	Soil
Nickel	0.375	U	mg/kg	MAM-P2268-SS	MAM-P2268-TIS	Tissue
BAF =	0.0378788					
Nickel	4.5	J	mg/kg	MAM-P2544-SS	MAM-P2544-SS	Soil
Nickel	0.415	U	mg/kg	MAM-P2544-SS	MAM-P2544-TIS	Tissue
BAF =	0.0922222					
Nickel	7		mg/kg	MAM-P2571-SS	MAM-P2571-SS	Soil
Nickel	0.425	U	mg/kg	MAM-P2571-SS	MAM-P2571-TIS	Tissue
BAF =	0.0607143					
Nickel	4.5	J	mg/kg	MAM-P2586-SS	MAM-P2586-SS	Soil
Nickel	0.38	U	mg/kg	MAM-P2586-SS	MAM-P2586-TIS	Tissue
BAF =	0.0844444					
Nickel	7		mg/kg	MAM-W220-SS	MAM-W220-SS	Soil
Nickel	0.435	U	mg/kg	MAM-W220-SS	MAM-W220-TIS	Tissue
BAF =	0.0621429					
Nickel	7		mg/kg	MAM-W220-SS	MAM-W220-SS	Soil
Nickel	0.35	U	mg/kg	MAM-W230-SS	MAM-W230-TIS	Tissue
BAF =	0.05					
Nickel	9.5		mg/kg	MAM-W250-SS	MAM-W250-SS	Soil
Nickel	0.425	U	mg/kg	MAM-W250-SS	MAM-W250-TIS	Tissue
BAF =	0.0447368					
Sample Size =	16					
BAF Arithmetic Mean =	0.1010844					
BAF Geometric Mean =	0.0870608					

Table D-3
Derivation of Bioaccumulation Factors (BAF) from Soil/Mammal Tissue Pairs

SELENIUM

Chemical	Result	Validation Qualifier	Units	Location	Sample #	Matrix
Selenium	1.1	J	mg/kg	MAM-CA518-SS	MAM-CA518-SS	Soil
Selenium	0.325	U	mg/kg	MAM-CA518-SS	MAM-CA518-TIS	Tissue
BAF =	0.2954545					
Selenium	1.3	J	mg/kg	MAM-CA562-SS	MAM-CA562-SS	Soil
Selenium	0.94	J	mg/kg	MAM-CA562-SS	MAM-CA562-TIS	Tissue
BAF =	0.7230769					
Selenium	6.6	J	mg/kg	MAM-CA586-SS	MAM-CA586-SS	Soil
Selenium	0.32	U	mg/kg	MAM-CA586-SS	MAM-CA586-TIS	Tissue
BAF =	0.0484848					
Selenium	1.8	J	mg/kg	MAM-CA958-SS	MAM-CA958-SS	Soil
Selenium	0.335	U	mg/kg	MAM-CA958-SS	MAM-CA958-TIS	Tissue
BAF =	0.1861111					
Selenium	1.3	J	mg/kg	MAM-CA966-SS	MAM-CA966-SS	Soil
Selenium	0.35	U	mg/kg	MAM-CA966-SS	MAM-CA966-TIS	Tissue
BAF =	0.2692308					
Selenium	0.8	J	mg/kg	MAM-CA990-SS	MAM-CA990-SS	Soil
Selenium	0.305	U	mg/kg	MAM-CA990-SS	MAM-CA990-TIS	Tissue
BAF =	0.38125					
Selenium	2.2	J	mg/kg	MAM-GP150-SS	MAM-GP150-SS	Soil
Selenium	0.345	U	mg/kg	MAM-GP150-SS	MAM-GP150-TIS	Tissue
BAF =	0.1568182					
Selenium	3.8	J	mg/kg	MAM-P2212-SS	MAM-P2212-SS	Soil
Selenium	0.28	U	mg/kg	MAM-P2212-SS	MAM-P2212-TIS	Tissue
BAF =	0.0736842					
Selenium	3.9	J	mg/kg	MAM-P2237-SS	MAM-P2237-SS	Soil
Selenium	0.305	U	mg/kg	MAM-P2237-SS	MAM-P2237-TIS	Tissue
BAF =	0.0782051					
Selenium	4	J	mg/kg	MAM-P2268-SS	MAM-P2268-SS	Soil
Selenium	0.29	U	mg/kg	MAM-P2268-SS	MAM-P2268-TIS	Tissue
BAF =	0.0725					
Selenium	2.9	J	mg/kg	MAM-P2544-SS	MAM-P2544-SS	Soil
Selenium	0.32	U	mg/kg	MAM-P2544-SS	MAM-P2544-TIS	Tissue
BAF =	0.1103448					
Selenium	4.2	J	mg/kg	MAM-P2571-SS	MAM-P2571-SS	Soil
Selenium	0.33	U	mg/kg	MAM-P2571-SS	MAM-P2571-TIS	Tissue
BAF =	0.0785714					
Selenium	1.9	J	mg/kg	MAM-P2586-SS	MAM-P2586-SS	Soil
Selenium	0.295	U	mg/kg	MAM-P2586-SS	MAM-P2586-TIS	Tissue
BAF =	0.1552632					
Selenium	1.7	J	mg/kg	MAM-W220-SS	MAM-W220-SS	Soil
Selenium	0.34	U	mg/kg	MAM-W220-SS	MAM-W220-TIS	Tissue
BAF =	0.2					
Selenium	1.7	J	mg/kg	MAM-W220-SS	MAM-W220-SS	Soil
Selenium	0.27	U	mg/kg	MAM-W230-SS	MAM-W230-TIS	Tissue
BAF =	0.1588235					
Selenium	2.5	J	mg/kg	MAM-W250-SS	MAM-W250-SS	Soil
Selenium	0.33	U	mg/kg	MAM-W250-SS	MAM-W250-TIS	Tissue
BAF =	0.132					
Sample Size =	16					
BAF Arithmetic Mean =	0.1949887					
BAF Geometric Mean =	0.1510153					

Table D-3
Derivation of Bioaccumulation Factors (BAF) from Soil/Mammal Tissue Pairs

VANADIUM

Chemical	Result	Validation Qualifier	Units	Location	Sample #	Matrix
Vanadium	11.5	JL	mg/kg	MAM-CA518-SS	MAM-CA518-SS	Soil
Vanadium	0.095	U	mg/kg	MAM-CA518-SS	MAM-CA518-TIS	Tissue
BAF =	0.0082609					
Vanadium	13.1	JL	mg/kg	MAM-CA562-SS	MAM-CA562-SS	Soil
Vanadium	0.075	U	mg/kg	MAM-CA562-SS	MAM-CA562-TIS	Tissue
BAF =	0.0057252					
Vanadium	41.8	JL	mg/kg	MAM-CA586-SS	MAM-CA586-SS	Soil
Vanadium	0.09	U	mg/kg	MAM-CA586-SS	MAM-CA586-TIS	Tissue
BAF =	0.0021531					
Vanadium	13.7	JL	mg/kg	MAM-CA958-SS	MAM-CA958-SS	Soil
Vanadium	0.095	U	mg/kg	MAM-CA958-SS	MAM-CA958-TIS	Tissue
BAF =	0.0069343					
Vanadium	13.1	JL	mg/kg	MAM-CA966-SS	MAM-CA966-SS	Soil
Vanadium	0.1	U	mg/kg	MAM-CA966-SS	MAM-CA966-TIS	Tissue
BAF =	0.0076336					
Vanadium	7.3	JL	mg/kg	MAM-CA990-SS	MAM-CA990-SS	Soil
Vanadium	0.085	U	mg/kg	MAM-CA990-SS	MAM-CA990-TIS	Tissue
BAF =	0.0116438					
Vanadium	17.7		mg/kg	MAM-GP150-SS	MAM-GP150-SS	Soil
Vanadium	0.1	U	mg/kg	MAM-GP150-SS	MAM-GP150-TIS	Tissue
BAF =	0.0056497					
Vanadium	26.1		mg/kg	MAM-P2212-SS	MAM-P2212-SS	Soil
Vanadium	0.22	J	mg/kg	MAM-P2212-SS	MAM-P2212-TIS	Tissue
BAF =	0.0084291					
Vanadium	28.7		mg/kg	MAM-P2237-SS	MAM-P2237-SS	Soil
Vanadium	0.18	J	mg/kg	MAM-P2237-SS	MAM-P2237-TIS	Tissue
BAF =	0.0062718					
Vanadium	29.6		mg/kg	MAM-P2268-SS	MAM-P2268-SS	Soil
Vanadium	0.085	U	mg/kg	MAM-P2268-SS	MAM-P2268-TIS	Tissue
BAF =	0.0028716					
Vanadium	22.6		mg/kg	MAM-P2544-SS	MAM-P2544-SS	Soil
Vanadium	0.09	U	mg/kg	MAM-P2544-SS	MAM-P2544-TIS	Tissue
BAF =	0.0039823					
Vanadium	18.8		mg/kg	MAM-P2571-SS	MAM-P2571-SS	Soil
Vanadium	0.095	U	mg/kg	MAM-P2571-SS	MAM-P2571-TIS	Tissue
BAF =	0.0050532					
Vanadium	18.5		mg/kg	MAM-P2586-SS	MAM-P2586-SS	Soil
Vanadium	0.085	U	mg/kg	MAM-P2586-SS	MAM-P2586-TIS	Tissue
BAF =	0.0045946					
Vanadium	15.4	JL	mg/kg	MAM-W220-SS	MAM-W220-SS	Soil
Vanadium	0.095	U	mg/kg	MAM-W220-SS	MAM-W220-TIS	Tissue
BAF =	0.0061688					
Vanadium	15.4	JL	mg/kg	MAM-W220-SS	MAM-W220-SS	Soil
Vanadium	0.075	U	mg/kg	MAM-W230-SS	MAM-W230-TIS	Tissue
BAF =	0.0048701					
Vanadium	21.1	JL	mg/kg	MAM-W250-SS	MAM-W250-SS	Soil
Vanadium	0.095	U	mg/kg	MAM-W250-SS	MAM-W250-TIS	Tissue
BAF =	0.0045024					
Sample Size =	16					
BAF Arithmetic Mean =	0.0059215					
BAF Geometric Mean =	0.0054861					

Table D-3
Derivation of Bioaccumulation Factors (BAF) from Soil/Mammal Tissue Pairs

ZINC

Chemical	Result	Validation Qualifier	Units	Location	Sample #	Matrix
Zinc	21	J	mg/kg	MAM-CA518-SS	MAM-CA518-SS	Soil
Zinc	2.3	U	mg/kg	MAM-CA518-SS	MAM-CA518-TIS	Tissue
BAF =	0.1095238					
Zinc	7.4	J	mg/kg	MAM-CA562-SS	MAM-CA562-SS	Soil
Zinc	10.7	J	mg/kg	MAM-CA562-SS	MAM-CA562-TIS	Tissue
BAF =	1.4459459					
Zinc	9.6	J	mg/kg	MAM-CA586-SS	MAM-CA586-SS	Soil
Zinc	14.3	J	mg/kg	MAM-CA586-SS	MAM-CA586-TIS	Tissue
BAF =	1.4895833					
Zinc	5.9	J	mg/kg	MAM-CA958-SS	MAM-CA958-SS	Soil
Zinc	2.4	U	mg/kg	MAM-CA958-SS	MAM-CA958-TIS	Tissue
BAF =	0.4067797					
Zinc	5.4	J	mg/kg	MAM-CA966-SS	MAM-CA966-SS	Soil
Zinc	2.5	U	mg/kg	MAM-CA966-SS	MAM-CA966-TIS	Tissue
BAF =	0.462963					
Zinc	4.7	J	mg/kg	MAM-CA990-SS	MAM-CA990-SS	Soil
Zinc	5.7	J	mg/kg	MAM-CA990-SS	MAM-CA990-TIS	Tissue
BAF =	1.212766					
Zinc	44.9		mg/kg	MAM-GP150-SS	MAM-GP150-SS	Soil
Zinc	5.7	J	mg/kg	MAM-GP150-SS	MAM-GP150-TIS	Tissue
BAF =	0.1269488					
Zinc	24.3		mg/kg	MAM-P2212-SS	MAM-P2212-SS	Soil
Zinc	4.7	J	mg/kg	MAM-P2212-SS	MAM-P2212-TIS	Tissue
BAF =	0.1934156					
Zinc	84.1		mg/kg	MAM-P2237-SS	MAM-P2237-SS	Soil
Zinc	5.1	J	mg/kg	MAM-P2237-SS	MAM-P2237-TIS	Tissue
BAF =	0.0606421					
Zinc	26.9		mg/kg	MAM-P2268-SS	MAM-P2268-SS	Soil
Zinc	6.2	J	mg/kg	MAM-P2268-SS	MAM-P2268-TIS	Tissue
BAF =	0.2304833					
Zinc	17.8		mg/kg	MAM-P2544-SS	MAM-P2544-SS	Soil
Zinc	21.5		mg/kg	MAM-P2544-SS	MAM-P2544-TIS	Tissue
BAF =	1.2078652					
Zinc	164		mg/kg	MAM-P2571-SS	MAM-P2571-SS	Soil
Zinc	2.35	U	mg/kg	MAM-P2571-SS	MAM-P2571-TIS	Tissue
BAF =	0.0143293					
Zinc	18.1		mg/kg	MAM-P2586-SS	MAM-P2586-SS	Soil
Zinc	2.1	U	mg/kg	MAM-P2586-SS	MAM-P2586-TIS	Tissue
BAF =	0.1160221					
Zinc	63.6	J	mg/kg	MAM-W220-SS	MAM-W220-SS	Soil
Zinc	5.5	J	mg/kg	MAM-W220-SS	MAM-W220-TIS	Tissue
BAF =	0.086478					
Zinc	63.6	J	mg/kg	MAM-W220-SS	MAM-W220-SS	Soil
Zinc	1.95	U	mg/kg	MAM-W230-SS	MAM-W230-TIS	Tissue
BAF =	0.0306604					
Zinc	132	J	mg/kg	MAM-W250-SS	MAM-W250-SS	Soil
Zinc	2.35	U	mg/kg	MAM-W250-SS	MAM-W250-TIS	Tissue
BAF =	0.017803					
Sample Size =	16					
BAF Arithmetic Mean =	0.4507631					
BAF Geometric Mean =	0.1841753					

Table D-3
Derivation of Bioaccumulation Factors (BAF) from Soil/Mammal Tissue Pairs

2,3,7,8-TCDD TEQ

Chemical	Result	Validation Qualifier	Units	Location	Sample #	Matrix
2,3,7,8-TCDD TEQ	3.549E-06		mg/kg	MAM-CA518-SS	MAM-CA518-SS	Soil
2,3,7,8-TCDD TEQ	1.219E-07		mg/kg	MAM-CA518-SS	MAM-CA518-TIS	Tissue
BAF =	0.0343527					
2,3,7,8-TCDD TEQ	3.435E-06		mg/kg	MAM-CA562-SS	MAM-CA562-SS	Soil
2,3,7,8-TCDD TEQ	1.772E-07		mg/kg	MAM-CA562-SS	MAM-CA562-TIS	Tissue
BAF =	0.0515956					
2,3,7,8-TCDD TEQ	3.337E-06		mg/kg	MAM-CA586-SS	MAM-CA586-SS	Soil
2,3,7,8-TCDD TEQ	1.755E-07		mg/kg	MAM-CA586-SS	MAM-CA586-TIS	Tissue
BAF =	0.0525798					
2,3,7,8-TCDD TEQ	3.463E-06		mg/kg	MAM-CA958-SS	MAM-CA958-SS	Soil
2,3,7,8-TCDD TEQ	1.642E-07		mg/kg	MAM-CA958-SS	MAM-CA958-TIS	Tissue
BAF =	0.0474157					
2,3,7,8-TCDD TEQ	3.452E-06		mg/kg	MAM-CA966-SS	MAM-CA966-SS	Soil
2,3,7,8-TCDD TEQ	1.227E-07	U	mg/kg	MAM-CA966-SS	MAM-CA966-TIS	Tissue
BAF =	0.0355483					
2,3,7,8-TCDD TEQ	3.416E-06		mg/kg	MAM-CA990-SS	MAM-CA990-SS	Soil
2,3,7,8-TCDD TEQ	1.472E-07	U	mg/kg	MAM-CA990-SS	MAM-CA990-TIS	Tissue
BAF =	0.0430867					
2,3,7,8-TCDD TEQ	3.968E-06		mg/kg	MAM-P2212-SS	MAM-P2212-SS	Soil
2,3,7,8-TCDD TEQ	1.586E-07		mg/kg	MAM-P2212-SS	MAM-P2212-TIS	Tissue
BAF =	0.0399652					
2,3,7,8-TCDD TEQ	7.352E-06		mg/kg	MAM-P2237-SS	MAM-P2237-SS	Soil
2,3,7,8-TCDD TEQ	1.847E-07		mg/kg	MAM-P2237-SS	MAM-P2237-TIS	Tissue
BAF =	0.0251274					
2,3,7,8-TCDD TEQ	4.195E-06		mg/kg	MAM-P2268-SS	MAM-P2268-SS	Soil
2,3,7,8-TCDD TEQ	2.189E-07		mg/kg	MAM-P2268-SS	MAM-P2268-TIS	Tissue
BAF =	0.0521915					
2,3,7,8-TCDD TEQ	3.887E-06		mg/kg	MAM-P2544-SS	MAM-P2544-SS	Soil
2,3,7,8-TCDD TEQ	1.511E-07		mg/kg	MAM-P2544-SS	MAM-P2544-TIS	Tissue
BAF =	0.0388684					
2,3,7,8-TCDD TEQ	4.053E-06		mg/kg	MAM-P2571-SS	MAM-P2571-SS	Soil
2,3,7,8-TCDD TEQ	8.675E-07		mg/kg	MAM-P2571-SS	MAM-P2571-TIS	Tissue
BAF =	0.2140371					
2,3,7,8-TCDD TEQ	1.532E-05		mg/kg	MAM-P2586-SS	MAM-P2586-SS	Soil
2,3,7,8-TCDD TEQ	1.798E-07	U	mg/kg	MAM-P2586-SS	MAM-P2586-TIS	Tissue
BAF =	0.0117362					
2,3,7,8-TCDD TEQ	5.007E-06		mg/kg	MAM-W220-SS	MAM-W220-SS	Soil
2,3,7,8-TCDD TEQ	8.263E-07		mg/kg	MAM-W220-SS	MAM-W220-TIS	Tissue
BAF =	0.1650286					
2,3,7,8-TCDD TEQ	5.007E-06		mg/kg	MAM-W220-SS	MAM-W220-SS	Soil
2,3,7,8-TCDD TEQ	3.413E-07		mg/kg	MAM-W230-SS	MAM-W230-TIS	Tissue
BAF =	0.0681641					
2,3,7,8-TCDD TEQ	9.648E-06		mg/kg	MAM-W250-SS	MAM-W250-SS	Soil
2,3,7,8-TCDD TEQ	3.256E-07		mg/kg	MAM-W250-SS	MAM-W250-TIS	Tissue
BAF =	0.0337477					
Sample Size =	15					
BAF Arithmetic Mean =	0.0608963					
BAF Geometric Mean =	0.0472707					

Table D-3
Derivation of Bioaccumulation Factors (BAF) from Soil/Mammal Tissue Pairs

4,4-DDE

Chemical	Result	Validation Qualifier	Units	Location	Sample #	Matrix
4,4'-DDE	0.0043	UJ	mg/kg	MAM-P2237-SS	MAM-P2237-SS	Soil
4,4'-DDE	0.0056		mg/kg	MAM-P2237-SS	MAM-P2237-TIS	Tissue
BAF =	1.3023256					
4,4'-DDE	0.0022	UJ	mg/kg	MAM-P2268-SS	MAM-P2268-SS	Soil
4,4'-DDE	0.0024		mg/kg	MAM-P2268-SS	MAM-P2268-TIS	Tissue
BAF =	1.0909091					
4,4'-DDE	0.0017	J	mg/kg	MAM-P2571-SS	MAM-P2571-SS	Soil
4,4'-DDE	0.001	U	mg/kg	MAM-P2571-SS	MAM-P2571-TIS	Tissue
BAF =	0.5882353					
Sample Size =	3					
BAF Arithmetic Mean =	0.9938233					
BAF Geometric Mean =	0.9419324					

4,4-DDT

Chemical	Result	Validation Qualifier	Units	Location	Sample #	Matrix
4,4'-DDT	0.0061	J	mg/kg	MAM-P2237-SS	MAM-P2237-SS	Soil
4,4'-DDT	0.001	U	mg/kg	MAM-P2237-SS	MAM-P2237-TIS	Tissue
BAF =	0.1639344					
4,4'-DDT	0.00215	U	mg/kg	MAM-W220-SS	MAM-W220-SS	Soil
4,4'-DDT	0.0025	J	mg/kg	MAM-W220-SS	MAM-W220-TIS	Tissue
BAF =	1.1627907					
4,4'-DDT	0.00235	U	mg/kg	MAM-W250-SS	MAM-W250-SS	Soil
4,4'-DDT	0.0086		mg/kg	MAM-W250-SS	MAM-W250-TIS	Tissue
BAF =	3.6595745					
Sample Size =	3					
BAF Arithmetic Mean =	1.6620999					
BAF Geometric Mean =	0.8868853					

ENDRIN

Chemical	Result	Validation Qualifier	Units	Location	Sample #	Matrix
Endrin	0.00205	U	mg/kg	MAM-CA586-SS	MAM-CA586-SS	Soil
Endrin	0.0023		mg/kg	MAM-CA586-SS	MAM-CA586-TIS	Tissue
BAF =	1.1219512					
Endrin	0.00215	U	mg/kg	MAM-W220-SS	MAM-W220-SS	Soil
Endrin	0.0026	J	mg/kg	MAM-W220-SS	MAM-W220-TIS	Tissue
BAF =	1.2093023					
Endrin	0.00235	U	mg/kg	MAM-W250-SS	MAM-W250-SS	Soil
Endrin	0.0031	J	mg/kg	MAM-W250-SS	MAM-W250-TIS	Tissue
BAF =	1.3191489					
Sample Size =	n = 3					
BAF Arithmetic Mean =	1.2168008					
BAF Geometric Mean =	1.2141366					

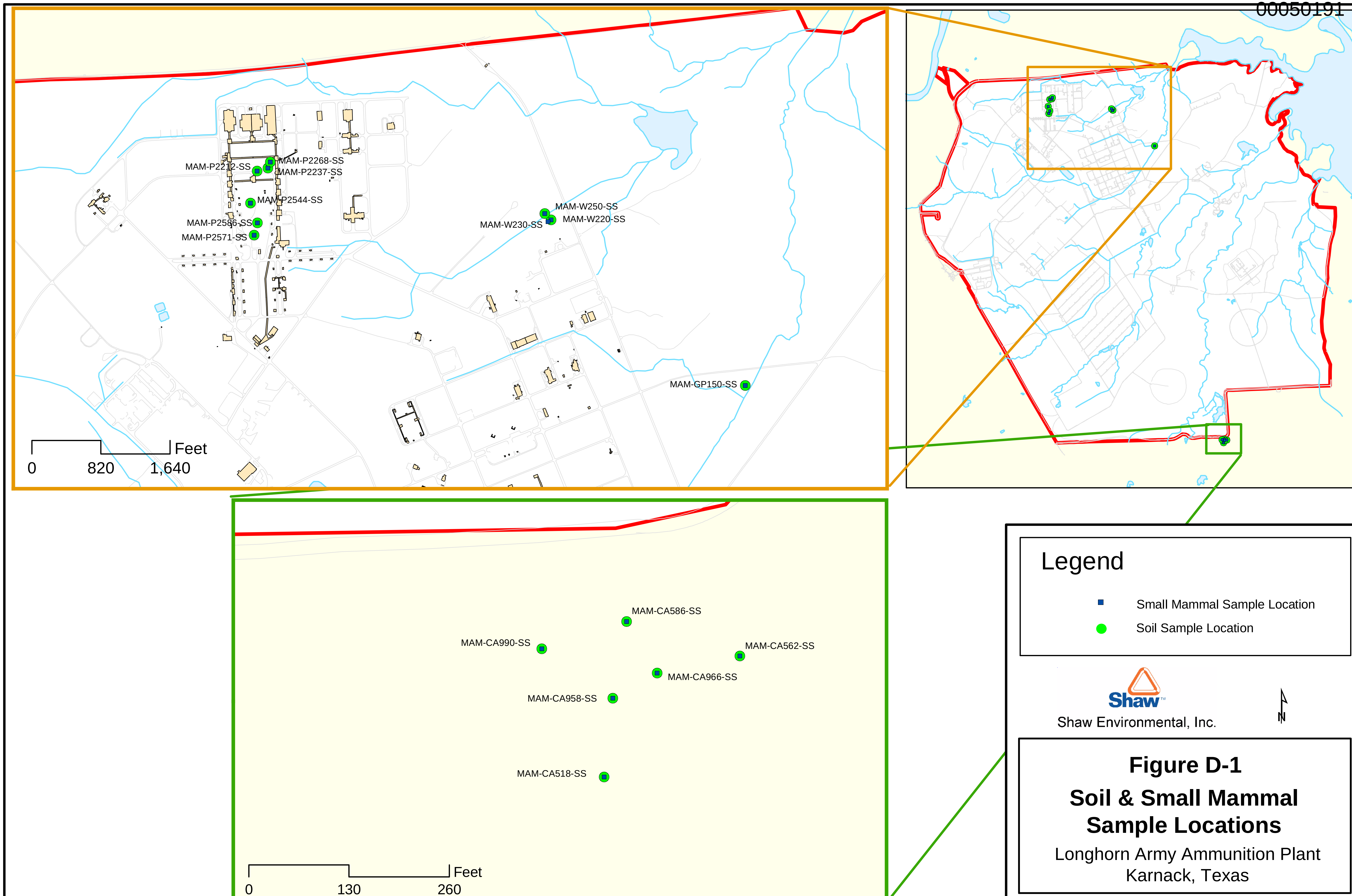
Table D-3
Derivation of Bioaccumulation Factors (BAF) from Soil/Mammal Tissue Pairs

AROCLOR 1254

Chemical	Result	Validation Qualifier	Units	Location	Sample #	Matrix
Aroclor 1254	0.105	U	mg/kg	MAM-P2237-SS	MAM-P2237-SS	Soil
Aroclor 1254	0.013	J	mg/kg	MAM-P2237-SS	MAM-P2237-TIS	Tissue
BAF =	0.1238095					
Aroclor 1254	0.011	U	mg/kg	MAM-P2268-SS	MAM-P2268-SS	Soil
Aroclor 1254	0.022	J	mg/kg	MAM-P2268-SS	MAM-P2268-TIS	Tissue
BAF =	2					
Sample Size =	n = 2					
BAF Arithmetic Mean =	1.0619048					
BAF Geometric Mean =	0.4976134					

AROCLOR 1260

Chemical	Result	Validation Qualifier	Units	Location	Sample #	Matrix
Aroclor 1260	0.036		mg/kg	MAM-W220-SS	MAM-W220-SS	Soil
Aroclor 1260	0.12		mg/kg	MAM-W220-SS	MAM-W220-TIS	Tissue
BAF =	3.3333333					
Aroclor 1260	0.036		mg/kg	MAM-W220-SS	MAM-W220-SS	Soil
Aroclor 1260	0.053		mg/kg	MAM-W230-SS	MAM-W230-TIS	Tissue
BAF =	1.4722222					
Aroclor 1260	0.179		mg/kg	MAM-W250-SS	MAM-W250-SS	Soil
Aroclor 1260	0.17		mg/kg	MAM-W250-SS	MAM-W250-TIS	Tissue
BAF =	0.9497207					
Sample Size =	n = 3					
BAF Arithmetic Mean =	1.9184254					
BAF Geometric Mean =	1.6703828					



Legend

- Small Mammal Sample Location
- Soil Sample Location

Shaw
Shaw Environmental, Inc.

N

Figure D-1

Soil & Small Mammal Sample Locations

Longhorn Army Ammunition Plant
Karnack, Texas

File Locations:
GISserver:\longhorn\gisworkspace\pace\mxd\mammals.mxd

Compiled By:
P.Pace 10/20/04

Checked By:
J.Lindberg

Approved By:
P.Srivastav

Plot Date: 10/04
Revision Format: 10/20/04

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Table E-1
Tier 1 Chemicals of Potential Concern
EEQs and Hazard Indices for the Deer Mouse at LHAAP
Industrial Sub-Area/Goose Praire Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL		LOAEL		Percent Contribution to	Percent Contribution to
							-----Unitless-----									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	EEQ N	mg/kg-d	EEQ L	EEQ N	EEQ L
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	8.59E-09	mg/L	1.56E-06	mg/kg	9.34E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	2.58E-09	0.00E+00	1.73E-08	0.00E+00	0.00E+00	9.63E-06	0.00E+00	1.97E-09	0.00E+00	0.00E+00	0.00E+00	9.65E-06	1.00E-06	9.65E+00	1.00E-05	9.65E-01	21.83%	18.81%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	mg/L	2.97E-03	mg/kg	1.77E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.28E-06	0.00E+00	0.00E+00	1.27E-03	0.00E+00	6.57E-06	0.00E+00	0.00E+00	0.00E+00	1.28E-03	8.00E-01	1.60E-03	4.00E+00	3.21E-04	0.00%	0.01%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.82E-02	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	3.38E-05	0.00E+00	0.00E+00	1.32E-02	0.00E+00	5.23E-04	0.00E+00	0.00E+00	0.00E+00	1.37E-02	8.00E-01	1.72E-02	4.00E+00	3.43E-03	0.04%	0.07%
4,4'-DDT	0.00E+00	mg/L	3.04E-03	mg/kg	6.08E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	0.00E+00	1.13E-05	0.00E+00	0.00E+00	4.54E-03	0.00E+00	2.26E-05	0.00E+00	0.00E+00	0.00E+00	4.57E-03	8.00E-01	5.71E-03	4.00E+00	1.14E-03	0.01%	0.02%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.50E-03	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.79E-06	0.00E+00	0.00E+00	1.12E-03	0.00E+00	4.72E-07	0.00E+00	0.00E+00	0.00E+00	1.12E-03	2.00E-01	5.61E-03	1.00E+00	1.12E-03	0.01%	0.02%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.08E-03	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.86E-06	0.00E+00	0.00E+00	1.52E-03	0.00E+00	3.89E-06	0.00E+00	0.00E+00	0.00E+00	1.53E-03	4.58E+00	3.34E-04	9.16E+00	1.67E-04	0.00%	0.00%
Aluminum	2.10E+00	mg/L	1.03E+04	mg/kg	7.38E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	6.29E-01	0.00E+00	1.37E+01	0.00E+00	0.00E+00	4.04E+01	0.00E+00	7.87E-01	0.00E+00	0.00E+00	0.00E+00	5.55E+01	1.93E+00	2.88E+01	1.93E+01	2.88E+00	65.08%	56.07%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E+00	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	4.68E-03	0.00E+00	0.00E+00	1.33E-01	0.00E+00	8.20E-03	0.00E+00	0.00E+00	0.00E+00	1.46E-01	1.25E-01	1.17E+00	1.25E+00	1.17E-01	2.65%	2.28%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	6.94E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.29E-05	0.00E+00	0.00E+00	5.09E-03	0.00E+00	5.25E-05	0.00E+00	0.00E+00	0.00E+00	5.16E-03	6.85E-02	7.53E-02	6.85E-01	7.53E-03	0.17%	0.15%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.45E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.69E-06	0.00E+00	0.00E+00	1.06E-03	0.00E+00	6.80E-07	0.00E+00	0.00E+00	0.00E+00	1.07E-03	6.80E-02	1.57E-02	6.80E-01	1.57E-03	0.04%	0.03%
Aroclor 1254	0.00E+00	mg/L	5.10E-02	mg/kg	5.66E-02	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	0.00E+00	1.05E-04	0.00E+00	0.00E+00	4.25E-02	0.00E+00	2.32E-05	0.00E+00	0.00E+00	0.00E+00	4.27E-02	6.80E-02	6.27E-01	6.80E-01	6.27E-02	1.42%	1.22%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.69E-02	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	3.14E-05	0.00E+00	0.00E+00	1.34E-02	0.00E+00	3.57E-06	0.00E+00	0.00E+00	0.00E+00	1.34E-02	6.80E-02	1.97E-01	6.80E-01	1.97E-02	0.45%	0.38%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.80E-01	0.00E+00	0.00%	0.00%
Barium	0.00E+00	mg/L	1.34E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E+00	0.00E+00	1.98E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00	0.00%	0.00%
bis(2-ethylhexyl)phthalate	2.43E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	7.28E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.28E-03	1.83E+01	3.97E-04	1.83E+02	3.98E-05	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	mg/L	5.24E-01	mg/kg	4.03E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.52E+01	8.28E-01	9.31E-01	9.31E-01	9.22E-01	9.22E-01	0.00E+00	0.00E+00	7.48E-04	0.00E+00	0.00E+00	4.72E-01	0.00E+00	1.74E-02	0.00E+00	0.00E+00	0.00E+00	4.90E-01	1.00E+00	4.90E-01	1.00E+01	4.90E-02	1.11%	0.96%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.84E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.41E-07	0.00E+00	0.00E+00	1.34E-04	0.00E+00	3.44E-07	0.00E+00	0.00E+00	0.00E+00	1.35E-04	4.58E+00	2.95E-05	9.16E+00	1.48E-05	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.82E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	0.00E+00	0.00E+00	3.37E-02	0.00E+00	0.00E+00	2.66E+00	0.00E+00	4.04E-01	0.00E+00	0.00E+00	0.00E+00	3.10E+00	3.28E+00	9.46E-01	1.31E+01	2.36E-01	2.14%	4.60%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.40E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	6.31E-07	0.00E+00	0.00E+00	2.49E-04	0.00E+00	6.36E-07	0.00E+00	0.00E+00	0.00E+00	2.50E-04	4.58E+00	5.46E-05	9.16E+00	2.73E-05	0.00%	0.00%
Copper	1.42E-02	mg/L	1.27E+01	mg/kg	1.87E+01	mg/kg	1.00E+00	5.92E+03	5.25E+00	6.54E-01	4.15E-01	3.28E-01	3.28E-01	1.49E-01	1.49E-01	4.25E-03	0.00E+00	3.47E-02	0.00E+00	0.00E+00	5.66E-01	0.00E+00	2.84E-01	0.00E+00	0.00E+00	0.00E+00	8.89E-01	1.17E+01	7.60E-02	1.51E+01	5.87E-02	0.17%	1.14%
Dieldrin	0.00E+00	mg/L	3.00E-03	mg/kg	3.29E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	6.10E-07	0.00E+00	0.00E+00	2.33E-04	0.00E+00	2.50E-05	0.00E+00	0.00E+00	0.00E+00	2.59E-04	2.00E-02	1.29E-02	2.00E-01	1.29E-03	0.03%	0.03%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.80E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	7.05E-07	0.00E+00	0.00E+00	2.69E-04	0.00E+00	6.74E-07	0.00E+00	0.00E+00	0.00E+00	2.70E-04	9.20E-02	2.94E-03	9.20E-01	2.94E-04	0.01%	0.01%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	9.74E-03	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.81E-05	0.00E+00	0.00E+00	7.11E-03	0.00E+00	1.82E-05	0.00E+00	0.00E+00	0.00E+00	7.15E-03	4.58E+00	1.56E-03	9.16E+00	7.81E-04	0.00%	0.02%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.11E-04	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.91E-07	0.00E+00	0.00E+00	1.52E-04	0.00E+00	1.55E-07	0.00E+00	0.00E+00	0.00E+00	1.52E-04	1.00E-01	1.52E-03	1.00E+00	1.52E-04	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.77E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.28E-07	0.00E+00	0.00E+00	1.27E-04	0.00E+00	1.55E-07	0.00E+00	0.00E+00	0.00E+00	1.28E-04	8.00E-02	1.60E-03	2.90E-01	4.41E-04	0.00%	0.01%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	3.14E+00	mg/L	0.00E+00	mg/kg	1.68E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	9.43E-01	0.00E+00	3.12E+01	0.00E+00	0.00E+00	6.08E+01	0.00E+00	3.12E+00	0.00E+00	0.00E+00	0.00E+00	9.61E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	7.76E-03	mg/L	7.66E+01	mg/kg	7.30E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	3.59E-01	3.92E-02	4.00E-02	4.00E-02	1.33E-02	1.33E-02	2.33E-03	0.00E+00	1.35E-01	0.00E+00	0.00E+00	1.21E+00	0.00E+00	1.36E-01	0.00E+00	0.00E+00	0.00E+00	1.49E+00	8.00E+00	1.86E-01	8.00E+01	1.86E-02	0.42%	0.36%
Manganese	2.73E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+03	2.10E+00	NA	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	8.19E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.19E-02	8.80E+01	9.31E-04	2.84E+02	2.88E-04	0.00%	0.01%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	7.96E-01	mg/kg	1.00E+00		2.87E+00	1.26E+00	NA	4.09E-01	4.09E-01	1.03E-01	1.03E-01	0.00E+00	0.00E+00	1.48E-03	0.00E+00	0.00E+00	4.65E-02	NA	1.51E-02	0.00E+00	0.00E+00	0.00E+00	6.30E-02	1.32E+01	4.78E-03	3.96E+01	1.59E-03	0.01%	0.03%
Mercury (methyl)	0.00E+00	mg/L	2.65E-01	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	6.78E-01	NA	NA			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	3.20E-02	0.00E+00	1.60E-01	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	7.00E-01	0.00E+00	0.00%	0.00%
Nickel	0.00E+00	mg/L	0.00E+00	mg/kg	8.88E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	NA	6.29E-02	6.29E-02	1.01E-01	1.01E-01	0.00E+00	0.00E+00	1.65E-02	0.00E+00	0.00E+00	1.95E+00	NA	2.59E-02	0.00E+00	0.00E+00	0.00E+00	1.99E+00	4.00E-01	4.97E-02	8.00E+01	2.49E-02	0.11%	0.48%
Nitrate	8.86E-01	mg/L	0.00E+00	mg/kg	1.12E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	2.66E-01	0.00E+00	2.07E-03	0.00E+00	0.00E+00	5.90E-02	0.00E+00	1.81E-02	0.00E+00	0.00E+00	0.00E+00	3.45E-01	5.07E+02	6.81E-04	1.13E+03	3.05E-04	0.00%	0.01%
Nitrate/Nitrite	8.12E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03								2.44E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.44E-02	5.07E+02	4.80E-05	1.13E+03	2.16E-05	0.00%	0.00%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	7.16E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.33E-06	0.00E+00	0.00E+00	5.04E-04	0.00E+00	1.11E-06	0.00E+00	0.00E+00	0.00E+00	5.07E-04	2.40E-01	2.11E-03	2.40E+00	2.11E-04	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	3.62E+00	mg/kg	1.00E+00			1.14E+00	NA	6.57E+00	6.57E+00	1.66E-01	1.66E-01	0.00E+00	0.00E+00	6.71E-03	0.00E+00	0.00E+00	1.91E-01	NA	1.10E+00	0.00E+00	0.00E+00	0.00E+00	1.30E+00	8.50E+00	1.53E-01	2.55E+01	5.09E-02	0.35%	0.99%
Selenium	3.74E-03	mg/L	1.29E+00	mg/kg	2.63E+00	mg/kg	1.00E+00	2.05E+02	4.50E+00	7.15E-01	5.20E-01	5.58E-01	5.58E-01	1.95E-01	1.95E-01	1.12E-03	0.00E+00	4.87E-03	0.00E+00	0.00E+00	8.71E-02	0.00E+00	6.80E-02	0.00E+00	0.00E+00	0.00E+00	1.61E-01	2.00E-01	8.05E-01	3.30E-01	4.88E-01	1.82%	9.52%
Silver	0.00E+00	mg/L	2.66E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.65E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	4.92E-02	0.00E+00	0.00E+00	3.42E-01	0.00E+00	4.30E-01	0.00E+00	0.00E+00	0.00E+00	8.21E-01	2.63E+02	3.12E-03	7.89E+02	1.04E-03	0.01%	0.02%
Sulfate	1.42E+01	mg/L	6.05E+00	mg/kg	1.75E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	4.27E+00	0.00E+00	3.25E-01	0.00E+00	0.00E+00	9.27E+00	0.00E+00	2.85E+00	0.00E+00	0.00E+00	0.00E+00	1.67E+01	NA	NA	NA	NA	NA	NA
Thallium	1.70E-03	mg/L	7.02E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00							5.10E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E-04	7.40E-03	6.89E-02	7.40E-02	6.89E-03	0.16%	0.13%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.59E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	6.66E-07	0.00E+00	0.00E+00	2.62E-04	0.00E+00	6.71E-07	0.00E+00	0.00E+00	0.00E+00	2.64E-04	4.58E+00	5.75E-05	9.16E+00	2.88E-05	0.00%	0.00%
Vanadium	0.00E+00	mg/L	0.00E+00	mg/kg	2.54E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	0.00E+00	0.00E+00	4.71E-02	0.00E+00	0.00E+00	1.04E-01	0.00E+00	4.71E-03	0.00E+00	0.00E+00	0.00E+00	1.55E-01	2.10E-01	7.40E-01	2.10E+00	7.40E-02	1.67%	1.44%
Zinc	8.78E-02	mg/L	9.41E+01	mg/kg	7.62E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	4.65E+00	6.57E-01	7.21E-01	7.21E-01	4.51E-01	4.51E-01	2.63E-02	0.00E+00	1.41E-01	0.00E+00	0.00E+00	1.64E+01	0.00E+00	2.55E+00	0.00E+00	0.00E+00	0.00E+00	1.91E+01	1.60E+02	1.20E-01	3.20E+02	5.98E-02	0.27%	1.17%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	3.6E-03	1.2E-03	0.01%	0.02%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	2.4E-02	4.9E-03	0.06%	0.10%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	9.2E-01	9.2E-02	2.07%	1.79%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	4.0E-04	4.0E-05	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	2.1E-02	2.7E-03	0.05%	0.05%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\,x\,Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0.5	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0.5	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.0000408	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.00204	kg/d
Body weight =	0.022	kg
Home range =	0.0345946	acres
Water intake rate =	0.0066	L/d
Site Area =	2330	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-2
Tier 2 Chemicals of Potential Concern
EEQs and Hazard Indices for the Deer Mouse at LHAAP
Industrial Sub-Area/Goose Prairie Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L
							---------------------------------------				Unitless			-------------------------------------		mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d	
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00
2,3,7,8-TCDD TEQ	7.00E-09	mg/L	1.27E-06	mg/kg	7.39E-06	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	2.10E-09	0.00E+00	1.37E-08	0.00E+00	0.00E+00	3.77E-06	0.00E+00	1.33E-09	0.00E+00	0.00E+00	0.00E+00	3.79E-06	1.00E-06	3.79E+00	1.00E-05	3.79E-01
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00
4,4'-DDD	0.00E+00	mg/L	2.56E-03	mg/kg	1.51E-03	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.79E-06	0.00E+00	0.00E+00	6.25E-04	0.00E+00	1.95E-06	0.00E+00	0.00E+00	0.00E+00	6.30E-04	8.00E-01	7.87E-04	4.00E+00	1.57E-04
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E-02	mg/kg	1.00E+00		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	2.65E-05	0.00E+00	0.00E+00	5.96E-03	0.00E+00	9.01E-05	0.00E+00	0.00E+00	0.00E+00	6.08E-03	8.00E-01	7.59E-03	4.00E+00	1.52E-03
4,4'-DDT	0.00E+00	mg/L	2.61E-03	mg/kg	4.99E-03	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	9.25E-06	0.00E+00	0.00E+00	2.15E-03	0.00E+00	6.48E-06	0.00E+00	0.00E+00	0.00E+00	2.16E-03	8.00E-01	2.70E-03	4.00E+00	5.40E-04
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.38E-03	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.56E-06	0.00E+00	0.00E+00	5.93E-04	0.00E+00	3.11E-07	0.00E+00	0.00E+00	0.00E+00	5.96E-04	2.00E-01	2.98E-03	1.00E+00	5.96E-04
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.28E-03	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.38E-06	0.00E+00	0.00E+00	5.41E-04	0.00E+00	5.55E-07	0.00E+00	0.00E+00	0.00E+00	5.44E-04	4.58E+00	1.19E-04	9.16E+00	5.94E-05
Aluminum	1.73E+00	mg/L	8.98E+03	mg/kg	7.05E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	5.19E-01	0.00E+00	1.31E+01	0.00E+00	0.00E+00	1.40E+01	0.00E+00	4.90E-01	0.00E+00	0.00E+00	0.00E+00	2.81E+01	1.93E+00	1.46E+01	1.93E+01	1.46E+00
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E+00	mg/kg	1.00E+00			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	4.42E-03	0.00E+00	0.00E+00	3.31E-02	0.00E+00	4.09E-03	0.00E+00	0.00E+00	0.00E+00	4.16E-02	1.25E-01	3.33E-01	1.25E+00	3.33E-02
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	5.90E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.09E-05	0.00E+00	0.00E+00	2.49E-03	0.00E+00	2.29E-06	0.00E+00	0.00E+00	0.00E+00	2.50E-03	6.85E-02	3.66E-02	6.85E-01	3.66E-03
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.27E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.36E-06	0.00E+00	0.00E+00	5.38E-04	0.00E+00	4.95E-07	0.00E+00	0.00E+00	0.00E+00	5.41E-04	6.80E-02	7.96E-03	6.80E-01	7.96E-04
Aroclor 1254	0.00E+00	mg/L	4.20E-02	mg/kg	4.34E-02	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	8.04E-05	0.00E+00	0.00E+00	1.88E-02	0.00E+00	7.19E-06	0.00E+00	0.00E+00	0.00E+00	1.89E-02	6.80E-02	2.78E-01	6.80E-01	2.78E-02
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.47E-02	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	2.73E-05	0.00E+00	0.00E+00	6.72E-03	0.00E+00	4.39E-07	0.00E+00	0.00E+00	0.00E+00	6.74E-03	6.80E-02	9.92E-02	6.80E-01	9.92E-03
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.80E-01	0.00E+00
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E+00	0.00E+00	1.98E+01	0.00E+00
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00
bis(2-ethylhexyl)phthalate	1.43E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	4.28E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.28E-03	1.83E+01	2.34E-04	1.83E+02	2.34E-05
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00
Cadmium	0.00E+00	mg/L	4.84E-01	mg/kg	3.79E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	2.60E+01	8.58E-01	9.58E-01	9.58E-01	6.72E-01	6.72E-01	0.00E+00	0.00E+00	7.03E-04	0.00E+00	0.00E+00	4.56E-01	0.00E+00	1.68E-02	0.00E+00	0.00E+00	0.00E+00	4.74E-01	1.00E+00	4.74E-01	1.00E+01	4.74E-02
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.60E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.96E-07	0.00E+00	0.00E+00	6.72E-05	0.00E+00	6.90E-08	0.00E+00	0.00E+00	0.00E+00	6.76E-05	4.58E+00	1.48E-05	9.16E+00	7.38E-06
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	0.00E+00	0.00E+00	3.21E-02	0.00E+00	0.00E+00	2.46E-01	0.00E+00	3.29E-02	0.00E+00	0.00E+00	0.00E+00	3.11E-01	3.28E+00	9.48E-02	1.31E+01	2.37E-02
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.76E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	5.12E-07	0.00E+00	0.00E+00	1.16E-04	0.00E+00	1.19E-07	0.00E+00	0.00E+00	0.00E+00	1.17E-04	4.58E+00	2.55E-05	9.16E+00	1.28E-05
Copper	1.23E-02	mg/L	1.08E+01	mg/kg	1.76E+01	mg/kg	1.00E+00	1.11E+03	1.56E+00	6.85E-01	4.57E-01	3.40E-01	3.40E-01	8.97E-02	8.97E-02	3.68E-03	0.00E+00	3.26E-02	0.00E+00	0.00E+00	5.58E-01	0.00E+00	2.77E-01	0.00E+00	0.00E+00	0.00E+00	8.71E-01	1.17E+01	7.45E-02	1.51E+01	5.75E-02
Dieldrin	0.00E+00	mg/L	2.57E-03	mg/kg	2.78E-04	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	5.16E-07	0.00E+00	0.00E+00	1.14E-04	0.00E+00	3.10E-07	0.00E+00	0.00E+00	0.00E+00	1.14E-04	2.00E-02	5.72E-03	2.00E-01	5.72E-04
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.31E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	6.15E-07	0.00E+00	0.00E+00	1.35E-04	0.00E+00	4.21E-07	0.00E+00	0.00E+00	0.00E+00	1.36E-04	9.20E-02	1.48E-03	9.20E-01	1.48E-04
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-03	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.00E-05	0.00E+00	0.00E+00	2.28E-03	0.00E+00	2.34E-06	0.00E+00	0.00E+00	0.00E+00	2.29E-03	4.58E+00	4.99E-04	9.16E+00	2.50E-04
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	1.86E-04	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.45E-07	0.00E+00	0.00E+00	7.72E-05	0.00E+00	9.95E-08	0.00E+00	0.00E+00	0.00E+00	7.76E-05	1.00E-01	7.76E-04	1.00E+00	7.76E-05
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.54E-04	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.86E-07	0.00E+00	0.00E+00	6.39E-05	0.00E+00	1.13E-07	0.00E+00	0.00E+00	0.00E+00	6.43E-05	8.00E-02	8.04E-04	2.90E-01	2.22E-04
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00
Iron	2.68E+00	mg/L	0.00E+00	mg/kg	1.59E+04	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	8.05E-01	0.00E+00	2.94E+01	0.00E+00	0.00E+00	2.65E+01	0.00E+00	2.94E+00	0.00E+00	0.00E+00	0.00E+00	5.96E+01	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Lead	6.26E-03	mg/L	5.97E+01	mg/kg	6.49E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	3.67E-01	4.37E-02	4.22E-02	4.22E-02	1.16E-02	1.16E-02	1.88E-03	0.00E+00	1.20E-01	0.00E+00	0.00E+00	1.10E+00	0.00E+00	1.27E-01	0.00E+00	0.00E+00	0.00E+00	1.35E+00	8.00E+00	1.69E-01	8.00E+01	1.69E-02
Manganese	2.12E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.50E+02	4.20E-01	NA	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	6.36E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.36E-02	8.80E+01	7.23E-04	2.84E+02	2.24E-04
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	4.57E-01	mg/kg	1.00E+00		1.14E+00	1.83E+00	NA	5.28E-01	5.28E-01	9.15E-02	9.15E-02	0.00E+00	0.00E+00	8.47E-04	0.00E+00	0.00E+00	3.87E-02	NA	1.12E-02	0.00E+00	0.00E+00	0.00E+00	5.07E-02	1.32E+01	3.84E-03	3.96E+01	1.28E-03
Mercury (methyl)	0.00E+00	mg/L	2.09E-01	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	7.56E-01	NA	NA			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	3.20E-02	0.00E+00	1.60E-01	0.00E+00
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	7.00E-01	0.00E+00
Nickel	0.00E+00	mg/L	0.00E+00	mg/kg	8.33E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	NA	6.39E-02	6.39E-02	8.71E-02	8.71E-02	0.00E+00	0.00E+00	1.54E-02	0.00E+00	0.00E+00	4.09E-01	NA	2.47E-02	0.00E+00	0.00E+00	0.00E+00	4.49E-01	4.00E+01	1.12E-02	8.00E+01	5.61E-03
Nitrate	4.70E-01	mg/L	0.00E+00	mg/kg	9.11E-01	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	1.41E-01	0.00E+00	1.69E-03	0.00E+00	0.00E+00	1.27E-02	0.00E+00	8.87E-03	0.00E+00	0.00E+00	0.00E+00	1.64E-01	5.07E+02	3.24E-04	1.13E+03	1.45E-04
Nitrate/Nitrite	6.18E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02								1.85E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.85E-02	5.07E+02	3.66E-05	1.13E+03	1.64E-05
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	9.43E-07	0.00E+00	0.00E+00	2.06E-04	0.00E+00	6.46E-07	0.00E+00	0.00E+00	0.00E+00	2.08E-04	2.40E-01	8.67E-04	2.40E+00	8.67E-05
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E+00	mg/kg	1.00E+00			3.00E-01	NA	8.18E+00	8.18E+00	1.11E-01	1.11E-01	0.00E+00	0.00E+00	3.92E-03	0.00E+00	0.00E+00	2.94E-02	NA	8.03E-01	0.00E+00	0.00E+00	0.00E+00	8.36E-01	8.50E+00	9.84E-02	2.55E+01	3.28E-02
Selenium	3.23E-03	mg/L	1.10E+00	mg/kg	1.98E+00	mg/kg	1.00E+00	2.05E+02	4.50E+00	7.72E-01	5.12E-01	5.42E-01	5.42E-01	1.51E-01	1.51E-01	9.68E-04	0.00E+00	3.67E-03	0.00E+00	0.00E+00	7.08E-02	0.00E+00	4.98E-02	0.00E+00	0.00E+00	0.00E+00	1.25E-01	2.00E-01	6.26E-01	3.30E-01	3.79E-01
Silver	0.00E+00	mg/L	2.05E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.46E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	4.56E-02	0.00E+00	0.00E+00	9.93E-02	0.00E+00	2.40E-01	0.00E+00	0.00E+00	0.00E+00	3.85E-01	2.63E+02	1.46E-03	7.89E+02	4.87E-04
Sulfate	1.10E+01	mg/L	4.59E+00	mg/kg	1.16E+02	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	3.30E+00	0.00E+00	2.16E-01	0.00E+00	0.00E+00	1.62E+00	0.00E+00	1.13E+00	0.00E+00	0.00E+00	0.00E+00	6.27E+00	NA	NA	NA	NA
Thallium	1.00E-03	mg/L	6.22E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00							3.01E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.01E-04	7.40E-03	4.06E-02	7.40E-02	4.06E-03
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.82E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	5.22E-07	0.00E+00	0.00E+00	1.19E-04	0.00E+00	1.22E-07	0.00E+00	0.00E+00	0.00E+00	1.19E-04	4.58E+00	2.61E-05	9.16E+00	1.30E-05
Vanadium	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	0.00E+00	0.00E+00	4.42E-02	0.00E+00	0.00E+00	4.64E-02	0.00E+00	3.98E-03	0.00E+00	0.00E+00	0.00E+00	9.45E-02	2.10E-01	4.50E-01	2.10E+00	4.50E-02
Zinc	6.50E-02	mg/L	7.78E+01	mg/kg	7.04E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	4.90E+00	7.15E-01	7.47E-01	7.47E-01	1.84E-01	1.84E-01	1.95E-02	0.00E+00	1.31E-01	0.00E+00	0.00E+00	1.60E+01	0.00E+00	2.44E+00	0.00E+00	0.00E+00	0.00E+00	1.86E+01	1.60E+02	1.16E-01	3.20E+02	5.81E-02

	EEQ N	EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.5E-03	4.2E-04
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	1.1E-02	2.2E-03
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	4.2E-01	4.2E-02
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	2.3E-04	2.3E-05
Aldrin/Dieldrin/Endrin EEQ:	1.0E-02	1.3E-03

Intake Equation:

$$E_j = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text tables.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0.5
Aquatic plant diet fraction =	0
Plant root diet fraction =	0
Fish diet fraction =	0
Aq. Invert diet fraction =	0
Terr. Invert diet fraction =	0.5
Mammal diet fraction =	0
Bird diet fraction =	0
Soil ingestion rate =	0.0000408
Sediment ingestion rate =	0
Food ingestion rate =	0.00204
Body weight =	0.022
Home range =	0.1457916
Water intake rate =	0.0066
Site Area =	2330
Area Use Factor (AUF) =	1
Exposure Duration (ED) =	1

Table E-3
Tier 1 Chemicals of Potential Concern
EEQs and Hazard Indices for the Raccoon at LHAAP
Industrial Sub-Area/Goose Praire Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L
							-----Unitless-----									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d	
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00
2,3,7,8-TCDD TEQ	8.59E-09	mg/L	1.56E-06	mg/kg	9.34E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	7.07E-10	3.68E-09	2.20E-08	3.66E-06	2.57E-07	1.56E-06	0.00E+00	1.28E-09	0.00E+00	1.43E-09	0.00E+00	5.51E-06	1.00E-06	5.51E+00	1.00E-05	5.51E-01
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00
4,4'-DDD	0.00E+00	mg/L	2.97E-03	mg/kg	1.77E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	7.01E-06	4.17E-06	0.00E+00	9.40E-06	2.07E-04	0.00E+00	4.26E-06	0.00E+00	5.12E-06	0.00E+00	2.37E-04	8.00E-01	2.96E-04	4.00E+00	5.92E-05
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.82E-02	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	4.29E-05	0.00E+00	0.00E+00	2.14E-03	0.00E+00	3.40E-04	0.00E+00	4.54E-05	0.00E+00	2.57E-03	8.00E-01	3.21E-03	4.00E+00	6.41E-04
4,4'-DDT	0.00E+00	mg/L	3.04E-03	mg/kg	6.08E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	7.17E-06	1.43E-05	0.00E+00	3.85E-05	7.36E-04	0.00E+00	1.46E-05	0.00E+00	2.54E-05	0.00E+00	8.36E-04	8.00E-01	1.05E-03	4.00E+00	2.09E-04
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.50E-03	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.54E-06	0.00E+00	0.00E+00	1.82E-04	0.00E+00	3.06E-07	0.00E+00	4.34E-06	0.00E+00	1.90E-04	2.00E-01	9.49E-04	1.00E+00	1.90E-04
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.08E-03	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.90E-06	0.00E+00	0.00E+00	2.47E-04	0.00E+00	2.52E-06	0.00E+00	6.01E-06	0.00E+00	2.60E-04	4.58E+00	5.68E-05	9.16E+00	2.84E-05
Aluminum	2.10E+00	mg/L	1.03E+04	mg/kg	7.38E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	1.73E-01	2.43E+01	1.74E+01	2.26E-02	3.49E+02	6.56E+00	0.00E+00	5.11E-01	0.00E+00	1.60E-01	0.00E+00	3.98E+02	1.93E+00	2.06E+02	1.93E+01	2.06E+01
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E+00	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	5.96E-03	0.00E+00	0.00E+00	2.17E-02	0.00E+00	5.32E-03	0.00E+00	1.05E-03	0.00E+00	3.40E-02	1.25E-01	2.72E-01	1.25E+00	2.72E-02
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	6.94E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.64E-05	0.00E+00	0.00E+00	8.26E-04	0.00E+00	3.41E-05	0.00E+00	2.01E-05	0.00E+00	8.97E-04	6.85E-02	1.31E-02	6.85E-01	1.31E-03
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.45E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.43E-06	0.00E+00	0.00E+00	1.73E-04	0.00E+00	4.42E-07	0.00E+00	4.20E-06	0.00E+00	1.81E-04	6.80E-02	2.66E-03	6.90E-01	2.62E-04
Aroclor 1254	0.00E+00	mg/L	5.10E-02	mg/kg	5.66E-02	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	1.20E-04	1.33E-04	0.00E+00	8.40E-03	6.90E-03	0.00E+00	1.51E-05	0.00E+00	1.51E-04	0.00E+00	1.57E-02	6.80E-02	2.31E-01	6.90E-01	2.28E-02
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.69E-02	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	3.99E-05	0.00E+00	0.00E+00	2.17E-03	0.00E+00	2.32E-06	0.00E+00	8.15E-05	0.00E+00	2.30E-03	6.80E-02	3.38E-02	6.90E-01	3.33E-03
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.90E-01	0.00E+00
Barium	0.00E+00	mg/L	1.34E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	3.15E-01	0.00E+00	0.00E+00	4.53E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.85E+00	5.10E+00	9.50E-01	1.98E+01	2.45E-01
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00
bis(2-ethylhexyl)phthalate	2.43E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	2.00E-03	0.00E+00	0.00E+00	9.44E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.64E-02	1.83E+01	5.26E-03	1.83E+02	5.27E-04
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00
Cadmium	0.00E+00	mg/L	5.24E-01	mg/kg	4.03E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.52E+01	8.28E-01	9.31E-01	9.31E-01	9.22E-01	9.22E-01	0.00E+00	1.24E-03	9.51E-04	0.00E+00	3.15E-02	7.66E-02	0.00E+00	1.13E-02	0.00E+00	9.33E-04	0.00E+00	1.23E-01	1.00E+00	1.23E-01	1.00E+01	1.23E-02
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.84E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.34E-07	0.00E+00	0.00E+00	2.18E-05	0.00E+00	2.23E-07	0.00E+00	5.32E-07	0.00E+00	2.30E-05	4.58E+00	5.02E-06	9.16E+00	2.51E-06
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.82E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	0.00E+00	0.00E+00	4.29E-02	0.00E+00	0.00E+00	4.32E-01	0.00E+00	2.63E-01	0.00E+00	1.52E-02	0.00E+00	7.53E-01	3.28E+00	2.30E-01	1.31E+01	5.73E-02
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.40E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	8.03E-07	0.00E+00	0.00E+00	4.04E-05	0.00E+00	4.13E-07	0.00E+00	9.84E-07	0.00E+00	4.26E-05	4.58E+00	9.29E-06	9.16E+00	4.65E-06
Copper	1.42E-02	mg/L	1.27E+01	mg/kg	1.87E+01	mg/kg	1.00E+00	5.92E+03	5.25E+00	6.54E-01	4.15E-01	3.28E-01	3.28E-01	1.49E-01	1.49E-01	1.17E-03	2.99E-02	4.41E-02	2.10E-01	5.00E-01	9.19E-02	0.00E+00	1.84E-01	0.00E+00	7.00E-03	0.00E+00	1.07E+00	1.17E+01	9.14E-02	1.51E+01	7.06E-02
Dieldrin	0.00E+00	mg/L	3.00E-03	mg/kg	3.29E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	7.07E-06	7.76E-07	0.00E+00	1.31E-04	3.78E-05	0.00E+00	1.62E-05	0.00E+00	9.51E-07	0.00E+00	1.94E-04	2.00E-02	9.68E-03	2.00E-01	9.68E-04
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.80E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	8.96E-07	0.00E+00	0.00E+00	4.37E-05	0.00E+00	4.37E-07	0.00E+00	1.16E-06	0.00E+00	4.62E-05	9.20E-02	5.02E-04	9.20E-01	5.02E-05
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	9.74E-03	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.30E-05	0.00E+00	0.00E+00	1.15E-03	0.00E+00	1.18E-05	0.00E+00	2.81E-05	0.00E+00	1.22E-03	4.58E+00	2.66E-04	9.16E+00	1.33E-04
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.11E-04	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.97E-07	0.00E+00	0.00E+00	2.46E-05	0.00E+00	1.01E-07	0.00E+00	6.09E-07	0.00E+00	2.58E-05	1.00E-01	2.58E-04	1.00E+00	2.58E-05
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.77E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.18E-07	0.00E+00	0.00E+00	2.07E-05	0.00E+00	1.01E-07	0.00E+00	5.12E-07	0.00E+00	2.17E-05	8.00E-02	2.71E-04	2.90E-01	7.49E-05
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00
Iron	3.14E+00	mg/L	0.00E+00	mg/kg	1.68E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	2.59E-01	0.00E+00	3.97E+01	7.88E+00	0.00E+00	9.87E+00	0.00E+00	2.03E+00	0.00E+00	8.73E-02	0.00E+00	5.98E+01	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Lead	7.76E-03	mg/L	7.66E+01	mg/kg	7.30E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	3.59E-01	3.92E-02	4.00E-02	4.00E-02	1.33E-02	1.33E-02	6.39E-04	1.81E-01	1.72E-01	2.92E-02	3.50E-01	1.97E-01	0.00E+00	8.80E-02	0.00E+00	2.44E-03	0.00E+00	1.02E+00	8.00E+00	1.28E-01	8.00E+01	1.28E-02
Manganese	2.73E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+03	2.10E+00	NA	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	2.25E-02	0.00E+00	0.00E+00	1.37E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.39E+00	8.80E+01	1.58E-02	2.84E+02	4.90E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	7.96E-01	mg/kg	1.00E+00		2.87E+00	1.26E+00	NA	4.09E-01	4.09E-01	1.03E-01	1.03E-01	0.00E+00	0.00E+00	1.88E-03	0.00E+00	0.00E+00	7.55E-03	NA	9.79E-03	0.00E+00	2.06E-04	0.00E+00	1.94E-02	1.00E+00	1.94E-02	3.00E+00	6.47E-03
Mercury (methyl)	0.00E+00	mg/L	2.65E-01	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	6.78E-01	NA	NA			0.00E+00	6.24E-04	0.00E+00	0.00E+00	5.71E-03	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	6.33E-03	1.50E-02	4.22E-01	2.50E-02	2.53E-01
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	7.00E-01	0.00E+00
Nickel	0.00E+00	mg/L	0.00E+00	mg/kg	8.88E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	NA	6.29E-02	6.29E-02	1.01E-01	1.01E-01	0.00E+00	0.00E+00	2.09E-02	0.00E+00	0.00E+00	3.16E-01	NA	1.68E-02	0.00E+00	2.25E-03	0.00E+00	3.56E-01	4.00E+01	8.90E-03	8.00E+01	4.45E-03
Nitrate	8.86E-01	mg/L	0.00E+00	mg/kg	1.12E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	7.30E-02	0.00E+00	2.63E-03	2.37E+00	0.00E+00	9.58E-03	0.00E+00	1.18E-02	0.00E+00	4.66E-04	0.00E+00	2.47E+00	5.07E+02	4.87E-03	1.13E+03	2.19E-03
Nitrate/Nitrite	8.12E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03								6.69E-03	0.00E+00	0.00E+00	2.17E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.24E-01	5.07E+02	4.42E-04	1.13E+03	1.98E-04
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	7.16E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.69E-06	0.00E+00	0.00E+00	8.19E-05	0.00E+00	7.22E-07	0.00E+00	2.07E-06	0.00E+00	8.63E-05	2.40E-01	3.60E-04	2.40E+00	3.60E-05
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	3.62E+00	mg/kg	1.00E+00			1.14E+00	NA	6.57E+00	6.57E+00	1.66E-01	1.66E-01	0.00E+00	0.00E+00	8.53E-03	0.00E+00	0.00E+00	3.10E-02	NA	7.15E-01	0.00E+00	1.51E-03	0.00E+00	7.56E-01	8.50E+00	8.89E-02	2.55E+01	2.96E-02
Selenium	3.74E-03	mg/L	1.29E+00	mg/kg	2.63E+00	mg/kg	1.00E+00	2.05E+02	4.50E+00	7.15E-01	5.20E-01	5.58E-01	5.58E-01	1.95E-01	1.95E-01	3.08E-04	3.04E-03	6.20E-03	1.92E-03	4.37E-02	1.41E-02	0.00E+00	4.42E-02	0.00E+00	1.29E-03	0.00E+00	1.15E-01	2.00E-01	5.74E-01	3.30E-01	3.48E-01
Silver	0.00E+00	mg/L	2.66E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	6.27E-03	0.00E+00	0.00E+00	9.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.63E-02	1.90E+01	5.07E-03	5.70E+01	1.69E-03
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.65E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	6.25E-02	0.00E+00	0.00E+00	5.55E-02	0.00E+00	2.79E-01	0.00E+00	1.11E-02	0.00E+00	4.08E-01	2.63E+02	1.55E-03	7.89E+02	5.18E-04
Sulfate	1.42E+01	mg/L	6.05E+00	mg/kg	1.75E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	1.17E+00	1.43E-02	4.14E-01	3.82E+01	9.56E-02	1.50E+00	0.00E+00	1.85E+00	0.00E+00	7.31E-02	0.00E+00	4.33E+01	NA	NA	NA	NA
Thallium	1.70E-03	mg/L	7.02E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00							1.40E-04	1.66E-03	0.00E+00	6.78E-02	2.38E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.34E-02	7.40E-03	1.26E+01	7.40E-02	1.26E+00
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.59E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	8.46E-07	0.00E+00	0.00E+00	4.26E-05	0.00E+00	4.36E-07	0.00E+00	1.04E-06	0.00E+00	4.49E-05	4.58E+00	9.80E-06	9.16E+00	4.90E-06
Vanadium	0.00E+00	mg/L	0.00E+00	mg/kg	2.54E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	0.00E+00	0.00E+00	5.99E-02	0.00E+00	0.00E+00	1.68E-02	0.00E+00	3.06E-03	0.00E+00	3.77E-04	0.00E+00	8.01E-02	2.10E-01	3.82E-01	2.10E+00	3.82E-02
Zinc	8.78E-02	mg/L	9.41E+01	mg/kg	7.62E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	4.65E+00	6.57E-01	7.21E-01	7.21E-01	4.51E-01	4.51E-01	7.23E-03	2.22E-01	1.80E-01	1.10E+00	5.33E+00	2.67E+00	0.00E+00	1.65E+00	0.00E+00	8.62E-02	0.00E+00	1.12E+01	1.60E+02	7.03E-02	3.20E+02	3.51E-02

	EEQ N	EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	6.0E-04	2.0E-04
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	4.5E-03	9.1E-04
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	2.8E-01	2.8E-02
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	5.3E-03	5.3E-04
Aldrin/Dieldrin/Endrin EEQ:	1.1E-02	1.2E-03

Intake Equation:

$$E_j = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\,x\,Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0.6
Aquatic plant diet fraction =	0
Plant root diet fraction =	0
Fish diet fraction =	0.05
Aq. Invert diet fraction =	0.15
Terr. Invert diet fraction =	0.15
Mammal diet fraction =	0.05
Bird diet fraction =	0
Soil ingestion rate =	0.01363
Sediment ingestion rate =	0.01363
Food ingestion rate =	0.29
Body weight =	5.78
Home range =	13.09653
Water intake rate =	0.476
Site Area =	2330
Area Use Factor (AUF) =	1
Exposure Duration (ED) =	1

Table E-4
Tier 2 Chemicals of Potential Concern
EEQs and Hazard Indices for the Raccoon at LHAAP
Industrial Sub-Area/Goose Praire Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
							-----Unitless-----								
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01
2,3,7,8-TCDD TEQ	7.00E-09	mg/L	1.27E-06	mg/kg	7.39E-06	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01
4,4'-DDD	0.00E+00	mg/L	2.56E-03	mg/kg	1.51E-03	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E-02	mg/kg	1.00E+00		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01
4,4'-DDT	0.00E+00	mg/L	2.61E-03	mg/kg	4.99E-03	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.38E-03	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.28E-03	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Aluminum	1.73E+00	mg/L	8.98E+03	mg/kg	7.05E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E+00	mg/kg	1.00E+00			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	5.90E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.27E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01
Aroclor 1254	0.00E+00	mg/L	4.20E-02	mg/kg	4.34E-02	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.47E-02	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01
bis(2-ethylhexyl)phthalate	1.43E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01
Cadmium	0.00E+00	mg/L	4.84E-01	mg/kg	3.79E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	2.60E+01	8.58E-01	9.58E-01	9.58E-01	6.72E-01	6.72E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.60E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.76E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Copper	1.23E-02	mg/L	1.08E+01	mg/kg	1.76E+01	mg/kg	1.00E+00	1.11E+03	1.56E+00	6.85E-01	4.57E-01	3.40E-01	3.40E-01	8.97E-02	8.97E-02
Dieldrin	0.00E+00	mg/L	2.57E-03	mg/kg	2.78E-04	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.31E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-03	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	1.86E-04	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.54E-04	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01
Iron	2.68E+00	mg/L	0.00E+00	mg/kg	1.59E+04	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E+01	1.39E+01	1.39E+01		
Lead	6.26E-03	mg/L	5.97E+01	mg/kg	6.49E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	3.67E-01	4.37E-02	4.22E-02	4.22E-02	1.16E-02	1.16E-02
Manganese	2.12E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.50E+02	4.20E-01	NA	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	4.57E-01	mg/kg	1.00E+00		1.14E+00	1.83E+00	NA	5.28E-01	5.28E-01	9.15E-02	9.15E-02
Mercury (methyl)	0.00E+00	mg/L	2.09E-01	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	7.56E-01	NA	NA		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01
Nickel	0.00E+00	mg/L	0.00E+00	mg/kg	8.33E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	NA	6.39E-02	6.39E-02	8.71E-02	8.71E-02
Nitrate	4.70E-01	mg/L	0.00E+00	mg/kg	9.11E-01	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Nitrate/Nitrite	6.18E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E+00	mg/kg	1.00E+00			3.00E-01	NA	8.18E+00	8.18E+00	1.11E-01	1.11E-01
Selenium	3.23E-03	mg/L	1.10E+00	mg/kg	1.98E+00	mg/kg	1.00E+00	2.05E+02	4.50E+00	7.72E-01	5.12E-01	5.42E-01	5.42E-01	1.51E-01	1.51E-01
Silver	0.00E+00	mg/L	2.05E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.46E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Sulfate	1.10E+01	mg/L	4.59E+00	mg/kg	1.16E+02	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Thallium	1.00E-03	mg/L	6.22E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.82E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Vanadium	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03
Zinc	6.50E-02	mg/L	7.78E+01	mg/kg	7.04E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	4.90E+00	7.15E-01	7.47E-01	7.47E-01	1.84E-01	1.84E-01

Chemical	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L
	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d	
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00
1,3-Dinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00
2,3,7,8-TCDD TEQ	5.76E-10	2.99E-09	1.74E-08	4.05E-07	4.46E-08	6.12E-07	0.00E+00	8.62E-10	0.00E+00	8.76E-10	0.00E+00	1.08E-06	1.00E-06	1.08E+00	1.00E-05	1.08E-01
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00
2,4-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00
2,6-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00
4,4'-DDD	0.00E+00	6.03E-06	3.55E-06	0.00E+00	8.09E-06	1.01E-04	0.00E+00	1.27E-06	0.00E+00	3.31E-06	0.00E+00	1.24E-04	8.00E-01	1.55E-04	4.00E+00	3.09E-05
4,4'-DDE	0.00E+00	0.00E+00	3.37E-05	0.00E+00	0.00E+00	9.67E-04	0.00E+00	5.85E-05	0.00E+00	3.38E-05	0.00E+00	1.09E-03	8.00E-01	1.37E-03	4.00E+00	2.73E-04
4,4'-DDT	0.00E+00	6.16E-06	1.18E-05	0.00E+00	3.30E-05	3.48E-04	0.00E+00	4.20E-06	0.00E+00	1.11E-05	0.00E+00	4.15E-04	8.00E-01	5.18E-04	4.00E+00	1.04E-04
Aldrin	0.00E+00	0.00E+00	3.26E-06	0.00E+00	0.00E+00	9.63E-05	0.00E+00	2.02E-07	0.00E+00	3.04E-06	0.00E+00	1.03E-04	2.00E-01	5.14E-04	1.00E+00	1.03E-04
alpha-Chlordane	0.00E+00	0.00E+00	3.03E-06	0.00E+00	0.00E+00	8.78E-05	0.00E+00	3.60E-07	0.00E+00	2.82E-06	0.00E+00	9.40E-05	4.58E+00	2.05E-05	9.16E+00	1.03E-05
Aluminum	1.42E-01	2.12E+01	1.66E+01	1.87E-02	3.04E+02	2.28E+00	0.00E+00	3.18E-01	0.00E+00	1.17E-01	0.00E+00	3.45E+02	1.93E+00	1.79E+02	1.93E+01	1.79E+01
Antimony	0.00E+00	0.00E+00	5.62E-03	0.00E+00	0.00E+00	5.38E-03	0.00E+00	2.65E-03	0.00E+00	6.62E-04	0.00E+00	1.43E-02	1.25E-01	1.15E-01	1.25E+00	1.15E-02
Aroclor 1242	0.00E+00	0.00E+00	1.39E-05	0.00E+00	0.00E+00	4.04E-04	0.00E+00	1.49E-06	0.00E+00	1.30E-05	0.00E+00	4.33E-04	6.85E-02	6.32E-03	6.85E-01	6.32E-04
Aroclor 1248	0.00E+00	0.00E+00	3.00E-06	0.00E+00	0.00E+00	8.74E-05	0.00E+00	3.21E-07	0.00E+00	2.80E-06	0.00E+00	9.35E-05	6.80E-02	1.38E-03	6.90E-01	1.36E-04
Aroclor 1254	0.00E+00	9.90E-05	1.02E-04	0.00E+00	1.48E-03	3.05E-03	0.00E+00	4.67E-06	0.00E+00	5.41E-05	0.00E+00	4.79E-03	6.80E-02	7.04E-02	6.90E-01	6.94E-03
Aroclor 1260	0.00E+00	0.00E+00	3.47E-05	0.00E+00	0.00E+00	1.09E-03	0.00E+00	2.85E-07	0.00E+00	6.17E-05	0.00E+00	1.19E-03	6.80E-02	1.75E-02	6.90E-01	1.72E-03
Aroclor 1268	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.90E-01	0.00E+00
Barium	0.00E+00	2.78E-01	0.00E+00	0.00E+00	4.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.28E+00	5.10E+00	8.39E-01	1.98E+01	2.16E-01
Benzoic Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00
bis(2-ethylhexyl)phthalate	1.18E-03	0.00E+00	0.00E+00	2.56E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E-02	1.83E+01	1.46E-03	1.83E+02	1.46E-04
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00
Cadmium	0.00E+00	1.14E-03	8.93E-04	0.00E+00	2.19E-03	7.40E-02	0.00E+00	1.09E-02	0.00E+00	6.39E-04	0.00E+00	8.98E-02	1.00E+00	8.98E-02	1.00E+01	8.98E-03
Chlordane	0.00E+00	0.00E+00	3.76E-07	0.00E+00	0.00E+00	1.09E-05	0.00E+00	4.48E-08	0.00E+00	3.51E-07	0.00E+00	1.17E-05	4.58E+00	2.55E-06	9.16E+00	1.28E-06
Chromium	0.00E+00	0.00E+00	4.08E-02	0.00E+00	0.00E+00	3.99E-02	0.00E+00	2.14E-02	0.00E+00	3.68E-03	0.00E+00	1.06E-01	3.28E+00	3.23E-02	1.31E+01	8.05E-03
cis-Nonachlor	0.00E+00	0.00E+00	6.51E-07	0.00E+00	0.00E+00	1.89E-05	0.00E+00	7.75E-08	0.00E+00	6.07E-07	0.00E+00	2.02E-05	4.58E+00	4.41E-06	9.16E+00	2.21E-06
Copper	1.01E-03	2.55E-02	4.14E-02	3.42E-02	1.27E-01	9.06E-02	0.00E+00	1.80E-01	0.00E+00	3.95E-03	0.00E+00	5.04E-01	1.17E+01	4.31E-02	1.51E+01	3.33E-02
Dieldrin	0.00E+00	6.06E-06	6.56E-07	0.00E+00	1.12E-04	1.84E-05	0.00E+00	2.01E-07	0.00E+00	6.12E-07	0.00E+00	1.38E-04	2.00E-02	6.91E-03	2.00E-01	6.91E-04
Endrin	0.00E+00	0.00E+00	7.82E-07	0.00E+00	0.00E+00	2.20E-05	0.00E+00	2.73E-07	0.00E+00	1.01E-06	0.00E+00	2.40E-05	9.20E-02	2.61E-04	9.20E-01	2.61E-05
gamma-Chlordane	0.00E+00	0.00E+00	1.27E-05	0.00E+00	0.00E+00	3.69E-04	0.00E+00	1.52E-06	0.00E+00	1.19E-05	0.00E+00	3.95E-04	4.58E+00	8.63E-05	9.16E+00	4.32E-05
Heptachlor	0.00E+00	0.00E+00	4.39E-07	0.00E+00	0.00E+00	1.25E-05	0.00E+00	6.46E-08	0.00E+00	4.09E-07	0.00E+00	1.34E-05	1.00E-01	1.34E-04	1.00E+00	1.34E-05
Hexachlorobenzene	0.00E+00	0.00E+00	3.63E-07	0.00E+00	0.00E+00	1.04E-05	0.00E+00	7.37E-08	0.00E+00	3.39E-07	0.00E+00	1.11E-05	8.00E-02	1.39E-04	2.90E-01	3.84E-05
HMX	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00
Iron	2.21E-01	0.00E+00	3.74E+01	1.68E+00	0.00E+00	4.30E+00	0.00E+00	1.91E+00	0.00E+00	7.00E-02	0.00E+00	4.56E+01	NA	NA	NA	NA
Isobutanol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Lead	5.15E-04	1.41E-01	1.53E-01	7.03E-03	3.19E-02	1.79E-01	0.00E+00	8.24E-02	0.00E+00	1.90E-03	0.00E+00	5.97E-01	8.00E+00	7.46E-02	8.00E+01	7.46E-03
Manganese	1.75E-02	0.00E+00	0.00E+00	1.33E-01	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.50E-01	8.80E+01	1.71E-03	2.84E+02	5.30E-04
Mercury (inorganic)	0.00E+00	0.00E+00	1.08E-03	0.00E+00	0.00E+00	6.28E-03	NA	7.25E-03	0.00E+00	1.05E-04	0.00E+00	1.47E-02	1.00E+00	1.47E-02	3.00E+00	4.91E-03
Mercury (methyl)	0.00E+00	4.92E-04	0.00E+00	0.00E+00	1.78E-03	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	2.28E-03	1.50E-02	1.52E-01	2.50E-02	9.11E-02
Mirex	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	7.00E-01	0.00E+00
Nickel	0.00E+00	0.00E+00	1.96E-02	0.00E+00	0.00E+00	6.64E-02	NA	1.60E-02	0.00E+00	1.82E-03	0.00E+00	1.04E-01	4.00E+01	2.60E-03	8.00E+01	1.30E-03
Nitrate	3.87E-02	0.00E+00	2.15E-03	3.55E-01	0.00E+00	2.06E-03	0.00E+00	5.76E-03	0.00E+00	2.53E-04	0.00E+00	4.04E-01	5.07E+02	7.97E-04	1.13E+03	3.57E-04
Nitrate/Nitrite	5.09E-03	0.00E+00	0.00E+00	4.67E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.18E-02	5.07E+02	1.02E-04	1.13E+03	4.58E-05
Oxychlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00
p-Isopropyltoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00
Pentachloroanisole	0.00E+00	0.00E+00	1.20E-06	0.00E+00	0.00E+00	3.35E-05	0.00E+00	4.20E-07	0.00E+00	1.12E-06	0.00E+00	3.62E-05	2.40E-01	1.51E-04	2.40E+00	1.51E-05
Pentachlorophenol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00
Perchlorate	0.00E+00	0.00E+00	4.99E-03	0.00E+00	0.00E+00	4.78E-03	NA	5.21E-01	0.00E+00	5.88E-04	0.00E+00	5.32E-01	8.50E+00	6.25E-02	2.55E+01	2.08E-02
Selenium	2.66E-04	2.60E-03	4.67E-03	1.66E-03	3.73E-02	1.15E-02	0.00E+00	3.23E-02	0.00E+00	7.50E-04	0.00E+00	9.11E-02	2.00E-01	4.55E-01	3.30E-01	2.76E-01
Silver	0.00E+00	4.83E-03	0.00E+00	0.00E+00	6.94E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.42E-02	1.90E+01	3.91E-03	5.70E+01	1.30E-03
Strontium	0.00E+00	0.00E+00	5.80E-02	0.00E+00	0.00E+00	1.61E-02	0.00E+00	1.56E-01	0.00E+00	6.84E-03	0.00E+00	2.37E-01	2.63E+02	9.00E-04	7.89E+02	3.00E-04
Sulfate	9.07E-01	1.08E-02	2.75E-01	8.31E+00	1.45E-02	2.63E-01	0.00E+00	7.36E-01	0.00E+00	3.24E-02	0.00E+00	1.06E+01	NA	NA	NA	NA
Thallium	8.25E-05	1.47E-03	0.00E+00	1.89E-04	2.11E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.28E-02	7.40E-03	3.08E+00	7.40E-02	3.08E-01
trans-Nonachlor	0.00E+00	0.00E+00	6.64E-07	0.00E+00	0.00E+00	1.93E-05	0.00E+00	7.91E-08	0.00E+00	6.19E-07	0.00E+00	2.06E-05	4.58E+00	4.50E-06	9.16E+00	2.25E-06
Vanadium	0.00E+00	0.00E+00	5.62E-02	0.00E+00	0.00E+00	7.53E-03	0.00E+00	2.58E-03	0.00E+00	3.28E-04	0.00E+00	6.66E-02	2.10E-01	3.17E-01	2.10E+00	3.17E-02
Zinc	5.35E-03	1.84E-01	1.66E-01	4.75E-01	1.13E+00	2.60E+00	0.00E+00	1.58E+00	0.00E+00	3.25E-02	0.00E+00	6.18E+00	1.60E+02	3.86E-02	3.20E+02	1.93E-02

	EEQ N	EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	2.5E-04	7.3E-05
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	2.0E-03	4.1E-04
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	9.6E-02	9.4E-03
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	1.5E-03	1.5E-04
Aldrin/Dieldrin/Endrin EEQ:	7.7E-03	8.2E-04

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\,x\,Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0.6
Aquatic plant diet fraction =	0
Plant root diet fraction =	0
Fish diet fraction =	0.05
Aq. Invert diet fraction =	0.15
Terr. Invert diet fraction =	0.15
Mammal diet fraction =	0.05
Bird diet fraction =	0
Soil ingestion rate =	0.01363
Sediment ingestion rate =	0.01363
Food ingestion rate =	0.29
Body weight =	5.78
Home range =	637.5293
Water intake rate =	0.476
Site Area =	2330
Area Use Factor (AUF) =	1
Exposure Duration (ED) =	1

Table E-5
Tier 1 COPCs
EEQs and Hazard Indices for the Raccoon-Louisiana Black Bear at LHAAP
Industrial Sub-Area/Goose Praire Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
							------	------	------	------	------Unitless------	------	------	------	
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00
2,3,7,8-TCDD TEQ	8.59E-09	mg/L	1.56E-06	mg/kg	9.34E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00
4,4'-DDD	0.00E+00	mg/L	2.97E-03	mg/kg	1.77E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.82E-02	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01
4,4'-DDT	0.00E+00	mg/L	3.04E-03	mg/kg	6.08E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.50E-03	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.08E-03	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Aluminum	2.10E+00	mg/L	1.03E+04	mg/kg	7.38E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E+00	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	6.94E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.45E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00
Aroclor 1254	0.00E+00	mg/L	5.10E-02	mg/kg	5.66E-02	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.69E-02	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00
Barium	0.00E+00	mg/L	1.34E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00
bis(2-ethylhexyl)phthalate	2.43E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00
Cadmium	0.00E+00	mg/L	5.24E-01	mg/kg	4.03E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.52E+01	8.28E-01	9.31E-01	9.31E-01	9.22E-01	9.22E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.84E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.82E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.40E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Copper	1.42E-02	mg/L	1.27E+01	mg/kg	1.87E+01	mg/kg	1.00E+00	5.92E+03	5.25E+00	6.54E-01	4.15E-01	3.28E-01	3.28E-01	1.49E-01	1.49E-01
Dieldrin	0.00E+00	mg/L	3.00E-03	mg/kg	3.29E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.80E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	9.74E-03	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.11E-04	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.77E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00
Iron	3.14E+00	mg/L	0.00E+00	mg/kg	1.68E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01		
Lead	7.76E-03	mg/L	7.66E+01	mg/kg	7.30E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	3.59E-01	3.92E-02	4.00E-02	4.00E-02	1.33E-02	1.33E-02
Manganese	2.73E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+03	2.10E+00	NA	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	7.96E-01	mg/kg	1.00E+00		2.87E+00	1.26E+00	NA	4.09E-01	4.09E-01	1.03E-01	1.03E-01
Mercury (methyl)	0.00E+00	mg/L	2.65E-01	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	6.78E-01	NA	NA		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00
Nickel	0.00E+00	mg/L	0.00E+00	mg/kg	8.88E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	NA	6.29E-02	6.29E-02	1.01E-01	1.01E-01
Nitrate	8.86E-01	mg/L	0.00E+00	mg/kg	1.12E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Nitrate/Nitrite	8.12E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	7.16E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	3.62E+00	mg/kg	1.00E+00			1.14E+00	NA	6.57E+00	6.57E+00	1.66E-01	1.66E-01
Selenium	3.74E-03	mg/L	1.29E+00	mg/kg	2.63E+00	mg/kg	1.00E+00	2.05E+02	4.50E+00	7.15E-01	5.20E-01	5.58E-01	5.58E-01	1.95E-01	1.95E-01
Silver	0.00E+00	mg/L	2.66E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.65E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Sulfate	1.42E+01	mg/L	6.05E+00	mg/kg	1.75E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Thallium	1.70E-03	mg/L	7.02E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.59E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Vanadium	0.00E+00	mg/L	0.00E+00	mg/kg	2.54E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03
Zinc	8.78E-02	mg/L	9.41E+01	mg/kg	7.62E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	4.65E+00	6.57E-01	7.21E-01	7.21E-01	4.51E-01	4.51E-01

Chemical	EED Surface Water (mg/kg-d)	EED Sediment (mg/kg-d)	EED Soil (mg/kg-d)	EED Fish (mg/kg-d)	EED Aq. Invert. (mg/kg-d)	EED Terr. Invert. (mg/kg-d)	EED Aq. Plants (mg/kg-d)	EED Terr. Plants (mg/kg-d)	EED Plant Roots (mg/kg-d)	EED Mammals (mg/kg-d)	EED Birds (mg/kg-d)	Total EED (mg/kg-d)	NOAEL (mg/kg-d)	EEQ N	LOAEL (mg/kg-d)	EEQ L
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00
1,3-Dinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00
2,3,7,8-TCDD TEQ	7.07E-10	6.46E-10	3.87E-09	2.16E-06	1.52E-07	9.21E-07	0.00E+00	7.54E-10	0.00E+00	8.41E-10	0.00E+00	3.24E-06	1.00E-06	3.24E+00	1.00E-05	3.24E-01
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00
2,4-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00
2,6-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00
4,4'-DDD	0.00E+00	1.23E-06	7.33E-07	0.00E+00	5.54E-06	1.22E-04	0.00E+00	2.51E-06	0.00E+00	3.02E-06	0.00E+00	1.35E-04	8.00E-01	1.69E-04	4.00E+00	3.37E-05
4,4'-DDE	0.00E+00	0.00E+00	7.54E-06	0.00E+00	0.00E+00	1.26E-03	0.00E+00	2.00E-04	0.00E+00	2.68E-05	0.00E+00	1.49E-03	8.00E-01	1.87E-03	4.00E+00	3.74E-04
4,4'-DDT	0.00E+00	1.26E-06	2.52E-06	0.00E+00	2.27E-05	4.34E-04	0.00E+00	8.63E-06	0.00E+00	1.49E-05	0.00E+00	4.84E-04	8.00E-01	6.05E-04	4.00E+00	1.21E-04
Aldrin	0.00E+00	0.00E+00	6.22E-07	0.00E+00	0.00E+00	1.07E-04	0.00E+00	1.81E-07	0.00E+00	2.56E-06	0.00E+00	1.10E-04	2.00E-01	5.52E-04	1.00E+00	1.10E-04
alpha-Chlordane	0.00E+00	0.00E+00	8.61E-07	0.00E+00	0.00E+00	1.45E-04	0.00E+00	1.49E-06	0.00E+00	3.55E-06	0.00E+00	1.51E-04	4.58E+00	3.31E-05	9.16E+00	1.65E-05
Aluminum	1.73E-01	4.26E+00	3.06E+00	1.33E-02	2.06E+02	3.87E+00	0.00E+00	3.01E-01	0.00E+00	9.46E-02	0.00E+00	2.17E+02	1.93E+00	1.13E+02	1.93E+01	1.13E+01
Antimony	0.00E+00	0.00E+00	1.05E-03	0.00E+00	0.00E+00	1.28E-02	0.00E+00	3.14E-03	0.00E+00	6.21E-04	0.00E+00	1.76E-02	1.25E-01	1.41E-01	1.25E+00	1.41E-02
Aroclor 1242	0.00E+00	0.00E+00	2.88E-06	0.00E+00	0.00E+00	4.87E-04	0.00E+00	2.01E-05	0.00E+00	1.18E-05	0.00E+00	5.22E-04	6.85E-02	7.62E-03	6.85E-01	7.62E-04
Aroclor 1248	0.00E+00	0.00E+00	6.02E-07	0.00E+00	0.00E+00	1.02E-04	0.00E+00	2.61E-07	0.00E+00	2.48E-06	0.00E+00	1.05E-04	6.80E-02	1.55E-03	6.90E-01	1.53E-04
Aroclor 1254	0.00E+00	2.11E-05	2.34E-05	0.00E+00	4.96E-03	4.07E-03	0.00E+00	8.88E-06	0.00E+00	8.89E-05	0.00E+00	9.17E-03	6.80E-02	1.35E-01	6.90E-01	1.33E-02
Aroclor 1260	0.00E+00	0.00E+00	7.01E-06	0.00E+00	0.00E+00	1.28E-03	0.00E+00	1.37E-06	0.00E+00	4.81E-05	0.00E+00	1.34E-03	6.80E-02	1.97E-02	6.90E-01	1.94E-03
Aroclor 1268	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.90E-01	0.00E+00
Barium	0.00E+00	5.54E-02	0.00E+00	0.00E+00	2.67E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.73E+00	5.10E+00	5.35E-01	1.98E+01	1.38E-01
Benzoic Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00
bis(2-ethylhexyl)phthalate	2.00E-03	0.00E+00	0.00E+00	5.57E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.77E-02	1.83E+01	3.15E-03	1.83E+02	3.15E-04
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00
Cadmium	0.00E+00	2.17E-04	1.67E-04	0.00E+00	1.86E-02	4.52E-02	0.00E+00	6.66E-03	0.00E+00	5.50E-04	0.00E+00	7.14E-02	1.00E+00	7.14E-02	1.00E+01	7.14E-03
Chlordane	0.00E+00	0.00E+00	7.62E-08	0.00E+00	0.00E+00	1.29E-05	0.00E+00	1.32E-07	0.00E+00	3.14E-07	0.00E+00	1.34E-05	4.58E+00	2.92E-06	9.16E+00	1.46E-06
Chromium	0.00E+00	0.00E+00	7.53E-03	0.00E+00	0.00E+00	2.55E-01	0.00E+00	1.55E-01	0.00E+00	8.96E-03	0.00E+00	4.26E-01	3.28E+00	1.30E-01	1.31E+01	3.24E-02
cis-Nonachlor	0.00E+00	0.00E+00	1.41E-07	0.00E+00	0.00E+00	2.38E-05	0.00E+00	2.44E-07	0.00E+00	5.80E-07	0.00E+00	2.48E-05	4.58E+00	5.41E-06	9.16E+00	2.70E-06
Copper	1.17E-03	5.24E-03	7.74E-03	1.24E-01	2.95E-01	5.42E-02	0.00E+00	1.09E-01	0.00E+00	4.13E-03	0.00E+00	6.00E-01	1.17E+01	5.13E-02	1.51E+01	3.96E-02
Dieldrin	0.00E+00	1.24E-06	1.36E-07	0.00E+00	7.71E-05	2.23E-05	0.00E+00	9.58E-06	0.00E+00	5.61E-07	0.00E+00	1.11E-04	2.00E-02	5.55E-03	2.00E-01	5.55E-04
Endrin	0.00E+00	0.00E+00	1.57E-07	0.00E+00	0.00E+00	2.58E-05	0.00E+00	2.58E-07	0.00E+00	6.84E-07	0.00E+00	2.69E-05	9.20E-02	2.92E-04	9.20E-01	2.92E-05
gamma-Chlordane	0.00E+00	0.00E+00	4.03E-06	0.00E+00	0.00E+00	6.81E-04	0.00E+00	6.97E-06	0.00E+00	1.66E-05	0.00E+00	7.09E-04	4.58E+00	1.55E-04	9.16E+00	7.73E-05
Heptachlor	0.00E+00	0.00E+00	8.73E-08	0.00E+00	0.00E+00	1.45E-05	0.00E+00	5.94E-08	0.00E+00	3.59E-07	0.00E+00	1.50E-05	1.00E-01	1.50E-04	1.00E+00	1.50E-05
Hexachlorobenzene	0.00E+00	0.00E+00	7.33E-08	0.00E+00	0.00E+00	1.22E-05	0.00E+00	5.94E-08	0.00E+00	3.02E-07	0.00E+00	1.26E-05	8.00E-02	1.58E-04	2.90E-01	4.35E-05
HMX	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00
Iron	2.59E-01	0.00E+00	6.97E+00	4.65E+00	0.00E+00	5.82E+00	0.00E+00	1.19E+00	0.00E+00	5.15E-02	0.00E+00	1.89E+01	NA	NA	NA	NA
Isobutanol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Lead	6.39E-04	3.17E-02	3.03E-02	1.72E-02	2.06E-01	1.16E-01	0.00E+00	5.19E-02	0.00E+00	1.44E-03	0.00E+00	4.56E-01	8.00E+00	5.70E-02	8.00E+01	5.70E-03
Manganese	2.25E-02	0.00E+00	0.00E+00	8.08E-01	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.30E-01	8.80E+01	9.43E-03	2.84E+02	2.92E-03
Mercury (inorganic)	0.00E+00	0.00E+00	3.30E-04	0.00E+00	0.00E+00	4.45E-03	NA	5.77E-03	0.00E+00	1.21E-04	0.00E+00	1.07E-02	1.00E+00	1.07E-02	3.00E+00	3.56E-03
Mercury (methyl)	0.00E+00	1.10E-04	0.00E+00	0.00E+00	3.37E-03	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	3.48E-03	1.50E-02	2.32E-01	2.50E-02	1.39E-01
Mirex	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	7.00E-01	0.00E+00
Nickel	0.00E+00	0.00E+00	3.68E-03	0.00E+00	0.00E+00	1.86E-01	NA	9.92E-03	0.00E+00	1.33E-03	0.00E+00	2.01E-01	4.00E+01	5.03E-03	8.00E+01	2.52E-03
Nitrate	7.30E-02	0.00E+00	4.63E-04	1.40E+00	0.00E+00	5.65E-03	0.00E+00	6.94E-03	0.00E+00	2.75E-04	0.00E+00	1.49E+00	5.07E+02	2.93E-03	1.13E+03	1.31E-03
Nitrate/Nitrite	6.69E-03	0.00E+00	0.00E+00	1.28E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.35E-01	5.07E+02	2.66E-04	1.13E+03	1.19E-04
Oxychlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00
p-Isopropyltoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00
Pentachloroanisole	0.00E+00	0.00E+00	2.97E-07	0.00E+00	0.00E+00	4.83E-05	0.00E+00	4.26E-07	0.00E+00	1.22E-06	0.00E+00	5.02E-05	2.40E-01	2.09E-04	2.40E+00	2.09E-05
Pentachlorophenol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00
Perchlorate	0.00E+00	0.00E+00	1.50E-03	0.00E+00	0.00E+00	1.83E-02	NA	4.21E-01	0.00E+00	8.89E-04	0.00E+00	4.42E-01	8.50E+00	5.20E-02	2.55E+01	1.73E-02
Selenium	3.08E-04	5.34E-04	1.09E-03	1.13E-03	2.58E-02	8.34E-03	0.00E+00	2.60E-02	0.00E+00	7.58E-04	0.00E+00	6.40E-02	2.00E-01	3.20E-01	3.30E-01	1.94E-01
Silver	0.00E+00	1.10E-03	0.00E+00	0.00E+00	5.31E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.42E-02	1.90E+01	2.85E-03	5.70E+01	9.51E-04
Strontium	0.00E+00	0.00E+00	1.10E-02	0.00E+00	0.00E+00	3.27E-02	0.00E+00	1.65E-01	0.00E+00	6.52E-03	0.00E+00	2.15E-01	2.63E+02	8.17E-04	7.89E+02	2.72E-04
Sulfate	1.17E+00	2.51E-03	7.27E-02	2.25E+01	5.64E-02	8.87E-01	0.00E+00	1.09E+00	0.00E+00	4.31E-02	0.00E+00	2.58E+01	NA	NA	NA	NA
Thallium	1.40E-04	2.91E-04	0.00E+00	4.00E-02	1.40E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E-02	7.40E-03	7.36E+00	7.40E-02	7.36E-01
trans-Nonachlor	0.00E+00	0.00E+00	1.49E-07	0.00E+00	0.00E+00	2.51E-05	0.00E+00	2.57E-07	0.00E+00	6.12E-07	0.00E+00	2.61E-05	4.58E+00	5.70E-06	9.16E+00	2.85E-06
Vanadium	0.00E+00	0.00E+00	1.05E-02	0.00E+00	0.00E+00	9.92E-03	0.00E+00	1.80E-03	0.00E+00	2.22E-04	0.00E+00	2.25E-02	2.10E-01	1.07E-01	2.10E+00	1.07E-02
Zinc	7.23E-03	3.90E-02	3.16E-02	6.49E-01	3.14E+00	1.57E+00	0.00E+00	9.76E-01	0.00E+00	5.08E-02	0.00E+00	6.47E+00	1.60E+02	4.04E-02	3.20E+02	2.02E-02

	EEQ N	EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	3.5E-04	1.2E-04
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	2.6E-03	5.3E-04
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.6E-01	1.6E-02
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	3.1E-03	3.2E-04
Aldrin/Dieldrin/Endrin EEQ:	6.4E-03	6.9E-04

Intake Equation:

$$Ej = \left(\frac{A}{HR}\right)\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0.6
Aquatic plant diet fraction =	0
Plant root diet fraction =	0
Fish diet fraction =	0.05
Aq. Invert diet fraction =	0.15
Terr. Invert diet fraction =	0.15
Mammal diet fraction =	0.05
Bird diet fraction =	0
Soil ingestion rate =	0.002394
Sediment ingestion rate =	0.002394
Food ingestion rate =	0.171
Body weight =	5.78
Home range =	2011
Water intake rate =	0.476
Site Area =	2330
Area Use Factor (AUF) =	1
Exposure Duration (ED) =	1

Table E-6
Tier 2 COPCs
EEQs and Hazard Indices for the Raccoon-Louisiana Black Bear at LHAAP
Industrial Sub-Area/Goose Praire Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L
							-----Unitless-----									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d	
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00
2,3,7,8-TCDD TEQ	7.00E-09	mg/L	1.27E-06	mg/kg	7.39E-06	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	5.76E-10	5.26E-10	3.06E-09	2.39E-07	2.63E-08	3.61E-07	0.00E+00	5.08E-10	0.00E+00	5.17E-10	0.00E+00	6.31E-07	1.00E-06	6.31E-01	1.00E-05	6.31E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00
4,4'-DDD	0.00E+00	mg/L	2.56E-03	mg/kg	1.51E-03	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	1.06E-06	6.24E-07	0.00E+00	4.77E-06	5.98E-05	0.00E+00	7.48E-07	0.00E+00	1.95E-06	0.00E+00	6.90E-05	8.00E-01	8.62E-05	4.00E+00	1.72E-05
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E-02	mg/kg	1.00E+00		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	5.92E-06	0.00E+00	0.00E+00	5.70E-04	0.00E+00	3.45E-05	0.00E+00	1.99E-05	0.00E+00	6.31E-04	8.00E-01	7.88E-04	4.00E+00	1.58E-04
4,4'-DDT	0.00E+00	mg/L	2.61E-03	mg/kg	4.99E-03	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	1.08E-06	2.07E-06	0.00E+00	1.95E-05	2.05E-04	0.00E+00	2.48E-06	0.00E+00	6.54E-06	0.00E+00	2.37E-04	8.00E-01	2.96E-04	4.00E+00	5.93E-05
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.38E-03	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	5.72E-07	0.00E+00	0.00E+00	5.68E-05	0.00E+00	1.19E-07	0.00E+00	1.79E-06	0.00E+00	5.92E-05	2.00E-01	2.96E-04	1.00E+00	5.92E-05
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.28E-03	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	5.32E-07	0.00E+00	0.00E+00	5.18E-05	0.00E+00	2.12E-07	0.00E+00	1.66E-06	0.00E+00	5.42E-05	4.58E+00	1.18E-05	9.16E+00	5.91E-06
Aluminum	1.73E+00	mg/L	8.98E+03	mg/kg	7.05E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	1.42E-01	3.72E+00	2.92E+00	1.10E-02	1.79E+02	1.34E+00	0.00E+00	1.88E-01	0.00E+00	6.90E-02	0.00E+00	1.88E+02	1.93E+00	9.72E+01	1.93E+01	9.72E+00
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E+00	mg/kg	1.00E+00			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	9.87E-04	0.00E+00	0.00E+00	3.17E-03	0.00E+00	1.56E-03	0.00E+00	3.90E-04	0.00E+00	6.11E-03	1.25E-01	4.89E-02	1.25E+00	4.89E-03
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	5.90E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.44E-06	0.00E+00	0.00E+00	2.38E-04	0.00E+00	8.77E-07	0.00E+00	7.64E-06	0.00E+00	2.49E-04	6.85E-02	3.64E-03	6.85E-01	3.64E-04
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.27E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	5.28E-07	0.00E+00	0.00E+00	5.15E-05	0.00E+00	1.90E-07	0.00E+00	1.65E-06	0.00E+00	5.39E-05	6.80E-02	7.93E-04	6.90E-01	7.81E-05
Aroclor 1254	0.00E+00	mg/L	4.20E-02	mg/kg	4.34E-02	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	1.74E-05	1.80E-05	0.00E+00	8.70E-04	1.80E-03	0.00E+00	2.75E-06	0.00E+00	3.19E-05	0.00E+00	2.74E-03	6.80E-02	4.03E-02	6.90E-01	3.97E-03
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.47E-02	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	6.10E-06	0.00E+00	0.00E+00	6.43E-04	0.00E+00	1.68E-07	0.00E+00	3.64E-05	0.00E+00	6.85E-04	6.80E-02	1.01E-02	6.90E-01	9.93E-04
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.90E-01	0.00E+00
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	4.89E-02	0.00E+00	0.00E+00	2.36E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.41E+00	5.10E+00	4.72E-01	1.98E+01	1.22E-01
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00
bis(2-ethylhexyl)phthalate	1.43E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	1.18E-03	0.00E+00	0.00E+00	1.51E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.63E-02	1.83E+01	8.88E-04	1.83E+02	8.90E-05
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00
Cadmium	0.00E+00	mg/L	4.84E-01	mg/kg	3.79E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	2.60E+01	8.58E-01	9.58E-01	9.58E-01	6.72E-01	6.72E-01	0.00E+00	2.00E-04	1.57E-04	0.00E+00	1.29E-03	4.37E-02	0.00E+00	6.44E-03	0.00E+00	3.77E-04	0.00E+00	5.21E-02	1.00E+00	5.21E-02	1.00E+01	5.21E-03
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.60E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	6.61E-08	0.00E+00	0.00E+00	6.43E-06	0.00E+00	2.64E-08	0.00E+00	2.07E-07	0.00E+00	6.73E-06	4.58E+00	1.47E-06	9.16E+00	7.35E-07
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	0.00E+00	0.00E+00	7.17E-03	0.00E+00	0.00E+00	2.35E-02	0.00E+00	1.26E-02	0.00E+00	2.17E-03	0.00E+00	4.55E-02	3.28E+00	1.39E-02	1.31E+01	3.46E-03
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.76E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.14E-07	0.00E+00	0.00E+00	1.11E-05	0.00E+00	4.57E-08	0.00E+00	3.58E-07	0.00E+00	1.16E-05	4.58E+00	2.54E-06	9.16E+00	1.27E-06
Copper	1.23E-02	mg/L	1.08E+01	mg/kg	1.76E+01	mg/kg	1.00E+00	1.11E+03	1.56E+00	6.85E-01	4.57E-01	3.40E-01	3.40E-01	8.97E-02	8.97E-02	1.01E-03	4.49E-03	7.27E-03	2.01E-02	7.50E-02	5.34E-02	0.00E+00	1.06E-01	0.00E+00	2.33E-03	0.00E+00	2.70E-01	1.17E+01	2.31E-02	1.51E+01	1.78E-02
Dieldrin	0.00E+00	mg/L	2.57E-03	mg/kg	2.78E-04	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	1.06E-06	1.15E-07	0.00E+00	6.61E-05	1.09E-05	0.00E+00	1.19E-07	0.00E+00	3.61E-07	0.00E+00	7.87E-05	2.00E-02	3.93E-03	2.00E-01	3.93E-04
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.31E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	1.37E-07	0.00E+00	0.00E+00	1.29E-05	0.00E+00	1.61E-07	0.00E+00	5.95E-07	0.00E+00	1.38E-05	9.20E-02	1.50E-04	9.20E-01	1.50E-05
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-03	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.24E-06	0.00E+00	0.00E+00	2.18E-04	0.00E+00	8.94E-07	0.00E+00	7.00E-06	0.00E+00	2.28E-04	4.58E+00	4.98E-05	9.16E+00	2.49E-05
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	1.86E-04	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	7.70E-08	0.00E+00	0.00E+00	7.39E-06	0.00E+00	3.81E-08	0.00E+00	2.41E-07	0.00E+00	7.74E-06	1.00E-01	7.74E-05	1.00E+00	7.74E-06
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.54E-04	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	6.38E-08	0.00E+00	0.00E+00	6.12E-06	0.00E+00	4.34E-08	0.00E+00	2.00E-07	0.00E+00	6.42E-06	8.00E-02	8.03E-05	2.90E-01	2.21E-05
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00
Iron	2.68E+00	mg/L	0.00E+00	mg/kg	1.59E+04	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	2.21E-01	0.00E+00	6.57E+00	9.92E-01	0.00E+00	2.53E+00	0.00E+00	1.13E+00	0.00E+00	4.13E-02	0.00E+00	1.15E+01	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Lead	6.26E-03	mg/L	5.97E+01	mg/kg	6.49E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	3.67E-01	4.37E-02	4.22E-02	4.22E-02	1.16E-02	1.16E-02	5.15E-04	2.47E-02	2.69E-02	4.15E-03	1.88E-02	1.06E-01	0.00E+00	4.86E-02	0.00E+00	1.12E-03	0.00E+00	2.30E-01	8.00E+00	2.88E-02	8.00E+01	2.88E-03
Manganese	2.12E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.50E+02	4.20E-01	NA	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	1.75E-02	0.00E+00	0.00E+00	7.84E-02	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.59E-02	8.80E+01	1.09E-03	2.84E+02	3.38E-04
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	4.57E-01	mg/kg	1.00E+00		1.14E+00	1.83E+00	NA	5.28E-01	5.28E-01	9.15E-02	9.15E-02	0.00E+00	0.00E+00	1.89E-04	0.00E+00	0.00E+00	3.70E-03	NA	4.28E-03	0.00E+00	6.18E-05	0.00E+00	8.23E-03	1.00E+00	8.23E-03	3.00E+00	2.74E-03
Mercury (methyl)	0.00E+00	mg/L	2.09E-01	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	7.56E-01	NA	NA			0.00E+00	8.65E-05	0.00E+00	0.00E+00	1.05E-03	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	1.14E-03	1.50E-02	7.59E-02	2.50E-02	4.56E-02
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	7.00E-01	0.00E+00
Nickel	0.00E+00	mg/L	0.00E+00	mg/kg	8.33E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	NA	6.39E-02	6.39E-02	8.71E-02	8.71E-02	0.00E+00	0.00E+00	3.45E-03	0.00E+00	0.00E+00	3.91E-02	NA	9.45E-03	0.00E+00	1.07E-03	0.00E+00	5.31E-02	4.00E+01	1.33E-03	8.00E+01	6.64E-04
Nitrate	4.70E-01	mg/L	0.00E+00	mg/kg	9.11E-01	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	3.87E-02	0.00E+00	3.78E-04	2.09E-01	0.00E+00	1.21E-03	0.00E+00	3.40E-03	0.00E+00	1.49E-04	0.00E+00	2.53E-01	5.07E+02	4.99E-04	1.13E+03	2.24E-04
Nitrate/Nitrite	6.18E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02								5.09E-03	0.00E+00	0.00E+00	2.75E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.26E-02	5.07E+02	6.43E-05	1.13E+03	2.89E-05
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.11E-07	0.00E+00	0.00E+00	1.98E-05	0.00E+00	2.47E-07	0.00E+00	6.59E-07	0.00E+00	2.09E-05	2.40E-01	8.70E-05	2.40E+00	8.70E-06
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E+00	mg/kg	1.00E+00			3.00E-01	NA	8.18E+00	8.18E+00	1.11E-01	1.11E-01	0.00E+00	0.00E+00	8.76E-04	0.00E+00	0.00E+00	2.82E-03	NA	3.07E-01	0.00E+00	3.47E-04	0.00E+00	3.11E-01	8.50E+00	3.66E-02	2.55E+01	1.22E-02
Selenium	3.23E-03	mg/L	1.10E+00	mg/kg	1.98E+00	mg/kg	1.00E+00	2.05E+02	4.50E+00	7.72E-01	5.12E-01	5.42E-01	5.42E-01	1.51E-01	1.51E-01	2.66E-04	4.56E-04	8.20E-04	9.78E-04	2.20E-02	6.78E-03	0.00E+00	1.91E-02	0.00E+00	4.42E-04	0.00E+00	5.08E-02	2.00E-01	2.54E-01	3.30E-01	1.54E-01
Silver	0.00E+00	mg/L	2.05E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	8.48E-04	0.00E+00	0.00E+00	4.09E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.18E-02	1.90E+01	2.20E-03	5.70E+01	7.33E-04
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.46E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	1.02E-02	0.00E+00	0.00E+00	9.50E-03	0.00E+00	9.17E-02	0.00E+00	4.03E-03	0.00E+00	1.15E-01	2.63E+02	4.39E-04	7.89E+02	1.46E-04
Sulfate	1.10E+01	mg/L	4.59E+00	mg/kg	1.16E+02	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	9.07E-01	1.90E-03	4.82E-02	4.90E+00	8.55E-03	1.55E-01	0.00E+00	4.34E-01	0.00E+00	1.91E-02	0.00E+00	6.48E+00	NA	NA	NA	NA
Thallium	1.00E-03	mg/L	6.22E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00							8.25E-05	2.58E-04	0.00E+00	1.11E-04	1.24E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.29E-02	7.40E-03	1.74E+00	7.40E-02	1.74E-01
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.82E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.17E-07	0.00E+00	0.00E+00	1.14E-05	0.00E+00	4.66E-08	0.00E+00	3.65E-07	0.00E+00	1.19E-05	4.58E+00	2.60E-06	9.16E+00	1.30E-06
Vanadium	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	0.00E+00	0.00E+00	9.87E-03	0.00E+00	0.00E+00	4.44E-03	0.00E+00	1.52E-03	0.00E+00	1.93E-04	0.00E+00	1.60E-02	2.10E-01	7.63E-02	2.10E+00	7.63E-03
Zinc	6.50E-02	mg/L	7.78E+01	mg/kg	7.04E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	4.90E+00	7.15E-01	7.47E-01	7.47E-01	1.84E-01	1.84E-01	5.35E-03	3.22E-02	2.92E-02	2.80E-01	6.69E-01	1.53E+00	0.00E+00	9.33E-01	0.00E+00	1.92E-02	0.00E+00	3.50E+00	1.60E+02	2.19E-02	3.20E+02	1.09E-02

	EEQ N	EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.5E-04	4.2E-05
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	1.2E-03	2.3E-04
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	5.5E-02	5.4E-03
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	8.9E-04	8.9E-05
Aldrin/Dieldrin/Endrin EEQ:	4.4E-03	4.7E-04

Intake Equation:

$$E_j = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0.6
Aquatic plant diet fraction =	0
Plant root diet fraction =	0
Fish diet fraction =	0.05
Aq. Invert diet fraction =	0.15
Terr. Invert diet fraction =	0.15
Mammal diet fraction =	0.05
Bird diet fraction =	0
Soil ingestion rate =	0.002394
Sediment ingestion rate =	0.002394
Food ingestion rate =	0.171
Body weight =	5.78
Home range =	2011
Water intake rate =	0.476
Site Area =	2330
Area Use Factor (AUF) =	1
Exposure Duration (ED) =	1

Table E-7
Tier 1 COPCs
EEQs and Hazard Indices for the Short-tailed Shrew at LHAAP
Industrial Sub-Area/Goose Prairie Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Total Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
							-----	-----	-----	-----	-----Unitless	-----	-----	-----	-----
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00
2,3,7,8-TCDD TEQ	8.59E-09	mg/L	1.56E-06	mg/kg	7.62E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00
4,4'-DDD	0.00E+00	mg/L	2.97E-03	mg/kg	1.88E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.72E-02	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01
4,4'-DDT	0.00E+00	mg/L	3.04E-03	mg/kg	6.89E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.82E-03	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.60E-03	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Aluminum	2.10E+00	mg/L	1.03E+04	mg/kg	9.54E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.10E+00	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	7.40E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.32E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00
Aroclor 1254	0.00E+00	mg/L	5.10E-02	mg/kg	5.39E-02	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.93E-02	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00
Barium	0.00E+00	mg/L	1.34E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00
bis(2-ethylhexyl)phthalate	2.43E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00
Cadmium	0.00E+00	mg/L	5.24E-01	mg/kg	8.87E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	1.77E+01	8.28E-01	6.53E-01	6.53E-01	9.22E-01	9.22E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.83E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.88E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.91E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Copper	1.42E-02	mg/L	1.27E+01	mg/kg	1.76E+01	mg/kg	1.00E+00	5.92E+03	5.25E+00	6.83E-01	4.15E-01	3.39E-01	3.39E-01	1.49E-01	1.49E-01
Dieldrin	0.00E+00	mg/L	3.00E-03	mg/kg	1.70E-03	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	4.03E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	5.38E-03	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	1.87E-04	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E-02	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00
Iron	3.14E+00	mg/L	0.00E+00	mg/kg	1.74E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01		
Lead	7.76E-03	mg/L	7.66E+01	mg/kg	4.75E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	3.89E-01	3.92E-02	4.84E-02	4.84E-02	1.33E-02	1.33E-02
Manganese	2.73E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+03	2.10E+00	NA	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.89E-01	mg/kg	1.00E+00		2.87E+00	1.54E+00	NA	4.69E-01	4.69E-01	1.03E-01	1.03E-01
Mercury (methyl)	0.00E+00	mg/L	2.65E-01	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	6.78E-01	NA	NA		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00
Nickel	0.00E+00	mg/L	0.00E+00	mg/kg	1.07E+01	mg/kg	1.00E+00		2.32E+00	4.73E+00	NA	6.00E-02	6.00E-02	1.01E-01	1.01E-01
Nitrate	8.86E-01	mg/L	0.00E+00	mg/kg	1.86E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Nitrate/Nitrite	8.12E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	8.77E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	3.79E+00	mg/kg	1.00E+00			1.14E+00	NA	6.44E+00	6.44E+00	1.66E-01	1.66E-01
Selenium	3.74E-03	mg/L	1.29E+00	mg/kg	1.50E+00	mg/kg	1.00E+00	2.05E+02	4.50E+00	8.32E-01	5.20E-01	5.28E-01	5.28E-01	1.95E-01	1.95E-01
Silver	0.00E+00	mg/L	2.66E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	5.39E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Sulfate	1.42E+01	mg/L	6.05E+00	mg/kg	1.35E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Thallium	1.70E-03	mg/L	7.02E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	4.15E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Vanadium	0.00E+00	mg/L	0.00E+00	mg/kg	2.60E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03
Zinc	8.78E-02	mg/L	9.41E+01	mg/kg	6.16E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.36E+00	6.57E-01	7.92E-01	7.92E-01	4.51E-01	4.51E-01

Chemical	EED Surface Water (mg/kg-d)	EED Sediment (mg/kg-d)	EED Soil (mg/kg-d)	EED Fish (mg/kg-d)	EED Aq. Invert. (mg/kg-d)	EED Terr. Invert. (mg/kg-d)	EED Aq. Plants (mg/kg-d)	EED Terr. Plants (mg/kg-d)	EED Plant Roots (mg/kg-d)	EED Mammals (mg/kg-d)	EED Birds (mg/kg-d)	Total EED (mg/kg-d)	NOAEL (mg/kg-d)	EEQ N	LOAEL (mg/kg-d)	EEQ L
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00
1,3-Dinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00
2,3,7,8-TCDD TEQ	1.89E-09	0.00E+00	1.06E-07	0.00E+00	0.00E+00	1.82E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E-05	1.00E-06	1.83E+01	1.00E-05	1.83E+00
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00
2,4-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00
2,6-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00
4,4'-DDD	0.00E+00	0.00E+00	2.62E-05	0.00E+00	0.00E+00	3.13E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.15E-03	8.00E-01	3.94E-03	4.00E+00	7.89E-04
4,4'-DDE	0.00E+00	0.00E+00	2.41E-04	0.00E+00	0.00E+00	2.89E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.91E-02	8.00E-01	3.64E-02	4.00E+00	7.28E-03
4,4'-DDT	0.00E+00	0.00E+00	9.63E-05	0.00E+00	0.00E+00	1.19E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E-02	8.00E-01	1.50E-02	4.00E+00	3.00E-03
Aldrin	0.00E+00	0.00E+00	3.94E-05	0.00E+00	0.00E+00	4.87E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.91E-03	2.00E-01	2.45E-02	1.00E+00	4.91E-03
alpha-Chlordane	0.00E+00	0.00E+00	3.64E-05	0.00E+00	0.00E+00	4.41E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.45E-03	4.58E+00	9.71E-04	9.16E+00	4.85E-04
Aluminum	4.61E-01	0.00E+00	1.33E+02	0.00E+00	0.00E+00	1.21E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.54E+02	1.93E+00	1.32E+02	1.93E+01	1.32E+01
Antimony	0.00E+00	0.00E+00	2.94E-02	0.00E+00	0.00E+00	2.58E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.87E-01	1.25E-01	2.30E+00	1.25E+00	2.30E-01
Aroclor 1242	0.00E+00	0.00E+00	1.03E-04	0.00E+00	0.00E+00	1.26E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E-02	6.85E-02	1.85E-01	6.85E-01	1.85E-02
Aroclor 1248	0.00E+00	0.00E+00	1.84E-05	0.00E+00	0.00E+00	2.24E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.26E-03	6.80E-02	3.32E-02	6.80E-01	3.32E-03
Aroclor 1254	0.00E+00	0.00E+00	7.52E-04	0.00E+00	0.00E+00	9.38E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.46E-02	6.80E-02	1.39E+00	6.80E-01	1.39E-01
Aroclor 1260	0.00E+00	0.00E+00	2.69E-04	0.00E+00	0.00E+00	3.53E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.55E-02	6.80E-02	5.23E-01	6.80E-01	5.23E-02
Aroclor 1268	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.80E-01	0.00E+00
Barium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E+00	0.00E+00	1.98E+01	0.00E+00
Benzoic Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00
bis(2-ethylhexyl)phthalate	5.34E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.34E-03	1.83E+01	2.91E-04	1.83E+02	2.92E-05
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00
Cadmium	0.00E+00	0.00E+00	1.24E-02	0.00E+00	0.00E+00	1.69E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.70E+00	1.00E+00	1.70E+00	1.00E+01	1.70E-01
Chlordane	0.00E+00	0.00E+00	2.55E-06	0.00E+00	0.00E+00	3.09E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.12E-04	4.58E+00	6.80E-05	9.16E+00	3.40E-05
Chromium	0.00E+00	0.00E+00	2.62E-01	0.00E+00	0.00E+00	6.37E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.63E+00	3.28E+00	2.02E+00	1.31E+01	5.05E-01
cis-Nonachlor	0.00E+00	0.00E+00	5.46E-06	0.00E+00	0.00E+00	6.62E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.67E-04	4.58E+00	1.46E-04	9.16E+00	7.28E-05
Copper	3.12E-03	0.00E+00	2.46E-01	0.00E+00	0.00E+00	1.29E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.54E+00	1.17E+01	1.32E-01	1.51E+01	1.02E-01
Dieldrin	0.00E+00	0.00E+00	2.38E-05	0.00E+00	0.00E+00	2.80E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.82E-03	2.00E-02	1.41E-01	2.00E-01	1.41E-02
Endrin	0.00E+00	0.00E+00	5.63E-06	0.00E+00	0.00E+00	6.61E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.67E-04	9.20E-02	7.25E-03	9.20E-01	7.25E-04
gamma-Chlordane	0.00E+00	0.00E+00	7.51E-05	0.00E+00	0.00E+00	9.10E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.18E-03	4.58E+00	2.00E-03	9.16E+00	1.00E-03
Heptachlor	0.00E+00	0.00E+00	2.61E-06	0.00E+00	0.00E+00	3.11E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.14E-04	1.00E-01	3.14E-03	1.00E+00	3.14E-04
Hexachlorobenzene	0.00E+00	0.00E+00	2.39E-04	0.00E+00	0.00E+00	2.86E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.88E-02	8.00E-02	3.60E-01	2.90E-01	9.93E-02
HMX	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00
Iron	6.91E-01	0.00E+00	2.43E+02	0.00E+00	0.00E+00	1.46E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.89E+02	NA	NA	NA	NA
Isobutanol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Lead	1.71E-03	0.00E+00	6.63E-01	0.00E+00	0.00E+00	1.98E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.65E+00	8.00E+00	3.31E-01	8.00E+01	3.31E-02
Manganese	6.01E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.01E-02	8.80E+01	6.82E-04	2.84E+02	2.11E-04
Mercury (inorganic)	0.00E+00	0.00E+00	8.22E-03	0.00E+00	0.00E+00	9.75E-02	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.06E-01	1.32E+01	8.01E-03	3.96E+01	2.67E-03
Mercury (methyl)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	3.20E-02	0.00E+00	1.60E-01	0.00E+00
Mirex	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	7.00E-01	0.00E+00
Nickel	0.00E+00	0.00E+00	1.50E-01	0.00E+00	0.00E+00	5.45E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.60E+00	4.00E+01	1.40E-01	8.00E+01	7.00E-02
Nitrate	1.95E-01	0.00E+00	2.59E-02	0.00E+00	0.00E+00	2.27E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.48E-01	5.07E+02	8.84E-04	1.13E+03	3.97E-04
Nitrate/Nitrite	1.79E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.79E-02	5.07E+02	3.52E-05	1.13E+03	1.58E-05
Oxychlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00
p-Isopropyltoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00
Pentachloroanisole	0.00E+00	0.00E+00	1.22E-05	0.00E+00	0.00E+00	1.43E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.44E-03	2.40E-01	6.01E-03	2.40E+00	6.01E-04
Pentachlorophenol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00
Perchlorate	0.00E+00	0.00E+00	5.29E-02	0.00E+00	0.00E+00	4.64E-01	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.16E-01	8.50E+00	6.08E-02	2.55E+01	2.03E-02
Selenium	8.22E-04	0.00E+00	2.09E-02	0.00E+00	0.00E+00	1.34E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.56E-01	2.00E-01	7.78E-01	3.30E-01	4.72E-01
Silver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00
Strontium	0.00E+00	0.00E+00	7.53E-01	0.00E+00	0.00E+00	1.61E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.36E+00	2.63E+02	8.98E-03	7.89E+02	2.99E-03
Sulfate	3.13E+00	0.00E+00	1.88E+00	0.00E+00	0.00E+00	1.65E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.15E+01	NA	NA	NA	NA
Thallium	3.74E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.74E-04	7.40E-03	5.05E-02	7.40E-02	5.05E-03
trans-Nonachlor	0.00E+00	0.00E+00	5.80E-06	0.00E+00	0.00E+00	7.03E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.09E-04	4.58E+00	1.55E-04	9.16E+00	7.74E-05
Vanadium	0.00E+00	0.00E+00	3.63E-01	0.00E+00	0.00E+00	2.46E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.09E-01	2.10E-01	2.90E+00	2.10E+00	2.90E-01
Zinc	1.93E-02	0.00E+00	8.60E-01	0.00E+00	0.00E+00	3.55E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.64E+01	1.60E+02	2.27E-01	3.20E+02	1.14E-01

	EEQ N	EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	6.5E-03	2.0E-03
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	5.5E-02	1.1E-02
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	2.1E+00	2.1E-01
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	2.9E-04	2.9E-05
Aldrin/Dieldrin/Endrin EEQ:	1.7E-01	2.0E-02

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value
Terrestrial plant diet fraction =	0
Aquatic plant diet fraction =	0
Plant root diet fraction =	0
Fish diet fraction =	0
Aq. Invert diet fraction =	0
Terr. Invert diet fraction =	1
Mammal diet fraction =	0
Bird diet fraction =	0
Soil ingestion rate =	0.000209
Sediment ingestion rate =	0
Food ingestion rate =	0.001611
Body weight =	0.015
Home range =	0.074131
Water intake rate =	0.0033
Site Area =	2330
Area Use Factor (AUF) =	1
Exposure Duration (ED) =	1

Table E-8
Tier 2 COPCs
EEQs and Hazard Indices for the Short-tailed Shrew at LHAAP
Industrial Sub-Area/Goose Prairie Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Total Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L
							-----Unitless-----									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d	
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00
2,3,7,8-TCDD TEQ	7.00E-09	mg/L	1.27E-06	mg/kg	5.82E-06	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	1.54E-09	0.00E+00	8.12E-08	0.00E+00	0.00E+00	6.88E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.96E-06	1.00E-06	6.96E+00	1.00E-05	6.96E-01
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00
4,4'-DDD	0.00E+00	mg/L	2.56E-03	mg/kg	1.64E-03	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.29E-05	0.00E+00	0.00E+00	1.58E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.60E-03	8.00E-01	2.00E-03	4.00E+00	4.00E-04
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.20E-02	mg/kg	1.00E+00		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	1.67E-04	0.00E+00	0.00E+00	1.16E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E-02	8.00E-01	1.47E-02	4.00E+00	2.94E-03
4,4'-DDT	0.00E+00	mg/L	2.61E-03	mg/kg	5.57E-03	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	7.77E-05	0.00E+00	0.00E+00	5.55E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.62E-03	8.00E-01	7.03E-03	4.00E+00	1.41E-03
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-03	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.45E-05	0.00E+00	0.00E+00	1.75E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.77E-03	2.00E-01	8.87E-03	1.00E+00	1.77E-03
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.34E-03	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.87E-05	0.00E+00	0.00E+00	1.31E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E-03	4.58E+00	2.90E-04	9.16E+00	1.45E-04
Aluminum	1.73E+00	mg/L	8.98E+03	mg/kg	8.99E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	3.81E-01	0.00E+00	1.26E+02	0.00E+00	0.00E+00	4.15E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.67E+02	1.93E+00	8.67E+01	1.93E+01	8.67E+00
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.05E+00	mg/kg	1.00E+00			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	2.86E-02	0.00E+00	0.00E+00	6.61E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.47E-02	1.25E-01	7.58E-01	1.25E+00	7.58E-02
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	6.31E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	8.81E-05	0.00E+00	0.00E+00	6.18E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.27E-03	6.85E-02	9.15E-02	6.85E-01	9.15E-03
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.11E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.54E-05	0.00E+00	0.00E+00	1.08E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E-03	6.80E-02	1.61E-02	6.80E-01	1.61E-03
Aroclor 1254	0.00E+00	mg/L	4.20E-02	mg/kg	3.78E-02	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	5.28E-04	0.00E+00	0.00E+00	3.80E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.85E-02	6.80E-02	5.66E-01	6.80E-01	5.66E-02
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.70E-02	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	2.38E-04	0.00E+00	0.00E+00	1.80E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.82E-02	6.80E-02	2.68E-01	6.80E-01	2.68E-02
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.80E-01	0.00E+00
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E+00	0.00E+00	1.98E+01	0.00E+00
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00
bis(2-ethylhexyl)phthalate	1.43E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	3.14E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.14E-03	1.83E+01	1.71E-04	1.83E+02	1.72E-05
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00
Cadmium	0.00E+00	mg/L	4.84E-01	mg/kg	7.47E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	1.91E+01	8.58E-01	7.06E-01	7.06E-01	6.72E-01	6.72E-01	0.00E+00	0.00E+00	1.04E-02	0.00E+00	0.00E+00	1.53E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.54E+00	1.00E+00	1.54E+00	1.00E+01	1.54E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.60E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.23E-06	0.00E+00	0.00E+00	1.56E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.58E-04	4.58E+00	3.45E-05	9.16E+00	1.72E-05
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	0.00E+00	0.00E+00	2.46E-01	0.00E+00	0.00E+00	5.80E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.26E-01	3.28E+00	2.52E-01	1.31E+01	6.29E-02
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.70E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.77E-06	0.00E+00	0.00E+00	2.63E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.67E-04	4.58E+00	5.83E-05	9.16E+00	2.92E-05
Copper	1.23E-02	mg/L	1.08E+01	mg/kg	1.33E+01	mg/kg	1.00E+00	1.11E+03	1.56E+00	8.47E-01	4.57E-01	4.03E-01	4.03E-01	8.97E-02	8.97E-02	2.70E-03	0.00E+00	1.86E-01	0.00E+00	0.00E+00	1.21E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.40E+00	1.17E+01	1.19E-01	1.51E+01	9.23E-02
Dieldrin	0.00E+00	mg/L	2.57E-03	mg/kg	1.51E-03	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.11E-05	0.00E+00	0.00E+00	1.43E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.45E-03	2.00E-02	7.26E-02	2.00E-01	7.26E-03
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.95E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	4.12E-06	0.00E+00	0.00E+00	2.79E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.83E-04	9.20E-02	3.07E-03	9.20E-01	3.07E-04
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.61E-03	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	5.03E-05	0.00E+00	0.00E+00	3.52E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.57E-03	4.58E+00	7.79E-04	9.16E+00	3.90E-04
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	1.65E-04	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.30E-06	0.00E+00	0.00E+00	1.58E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.60E-04	1.00E-01	1.60E-03	1.00E+00	1.60E-04
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.48E-02	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.06E-04	0.00E+00	0.00E+00	1.42E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.44E-02	8.00E-02	1.80E-01	2.90E-01	4.97E-02
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00
Iron	2.68E+00	mg/L	0.00E+00	mg/kg	1.64E+04	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	5.90E-01	0.00E+00	2.29E+02	0.00E+00	0.00E+00	6.35E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.93E+02	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Lead	6.26E-03	mg/L	5.97E+01	mg/kg	3.99E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	4.02E-01	4.37E-02	5.22E-02	5.22E-02	1.16E-02	1.16E-02	1.38E-03	0.00E+00	5.57E-01	0.00E+00	0.00E+00	1.73E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.28E+00	8.00E+00	2.85E-01	8.00E+01	2.85E-02
Manganese	2.12E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.50E+02	4.20E-01	NA	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	4.66E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.66E-02	8.80E+01	5.30E-04	2.84E+02	1.64E-04
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	2.65E-01	mg/kg	1.00E+00		1.14E+00	2.63E+00	NA	6.77E-01	6.77E-01	9.15E-02	9.15E-02	0.00E+00	0.00E+00	3.70E-03	0.00E+00	0.00E+00	7.49E-02	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.86E-02	1.32E+01	5.96E-03	3.96E+01	1.99E-03
Mercury (methyl)	0.00E+00	mg/L	2.09E-01	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	7.56E-01	NA	NA			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	3.20E-02	0.00E+00	1.60E-01	0.00E+00
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	7.00E-01	0.00E+00
Nickel	0.00E+00	mg/L	0.00E+00	mg/kg	9.95E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	NA	6.11E-02	6.11E-02	8.71E-02	8.71E-02	0.00E+00	0.00E+00	1.39E-01	0.00E+00	0.00E+00	1.13E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E+00	4.00E+01	3.18E-02	8.00E+01	1.59E-02
Nitrate	4.70E-01	mg/L	0.00E+00	mg/kg	1.21E+00	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	1.03E-01	0.00E+00	1.68E-02	0.00E+00	0.00E+00	3.89E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E-01	5.07E+02	3.14E-04	1.13E+03	1.41E-04
Nitrate/Nitrite	6.18E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02								1.36E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E-02	5.07E+02	2.68E-05	1.13E+03	1.20E-05
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.07E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	7.08E-06	0.00E+00	0.00E+00	4.76E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.84E-04	2.40E-01	2.01E-03	2.40E+00	2.01E-04
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.93E+00	mg/kg	1.00E+00			3.00E-01	NA	7.16E+00	7.16E+00	1.11E-01	1.11E-01	0.00E+00	0.00E+00	4.09E-02	0.00E+00	0.00E+00	9.43E-02	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.35E-01	8.50E+00	1.59E-02	2.55E+01	5.30E-03
Selenium	3.23E-03	mg/L	1.10E+00	mg/kg	1.17E+00	mg/kg	1.00E+00	2.05E+02	4.50E+00	8.89E-01	5.12E-01	5.15E-01	5.15E-01	1.51E-01	1.51E-01	7.10E-04	0.00E+00	1.64E-02	0.00E+00	0.00E+00	1.12E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.29E-01	2.00E-01	6.45E-01	3.30E-01	3.91E-01
Silver	0.00E+00	mg/L	2.05E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	3.84E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	5.36E-01	0.00E+00	0.00E+00	3.59E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.95E-01	2.63E+02	3.40E-03	7.89E+02	1.13E-03
Sulfate	1.10E+01	mg/L	4.59E+00	mg/kg	9.41E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	2.42E+00	0.00E+00	1.31E+00	0.00E+00	0.00E+00	3.03E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.77E+00	NA	NA	NA	NA
Thallium	1.00E-03	mg/L	6.22E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00							2.20E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.20E-04	7.40E-03	2.98E-02	7.40E-02	2.98E-03
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.72E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.79E-06	0.00E+00	0.00E+00	2.65E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.69E-04	4.58E+00	5.87E-05	9.16E+00	2.93E-05
Vanadium	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	0.00E+00	0.00E+00	3.47E-01	0.00E+00	0.00E+00	1.12E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.59E-01	2.10E-01	2.18E+00	2.10E+00	2.18E-01
Zinc	6.50E-02	mg/L	7.78E+01	mg/kg	5.34E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	5.90E+00	7.15E-01	8.44E-01	8.44E-01	1.84E-01	1.84E-01	1.43E-02	0.00E+00	7.45E-01	0.00E+00	0.00E+00	3.38E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.46E+01	1.60E+02	2.16E-01	3.20E+02	1.08E-01

	EEQ N	EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	2.8E-03	7.7E-04
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	2.4E-02	4.7E-03
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	9.4E-01	9.4E-02
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	1.7E-04	1.7E-05
Aldrin/Dieldrin/Endrin EEQ:	8.5E-02	9.3E-03

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,xCij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0
Aquatic plant diet fraction =	0
Plant root diet fraction =	0
Fish diet fraction =	0
Aq. Invert diet fraction =	0
Terr. Invert diet fraction =	1
Mammal diet fraction =	0
Bird diet fraction =	0
Soil ingestion rate =	0.000209
Sediment ingestion rate =	0
Food ingestion rate =	0.001611
Body weight =	0.015
Home range =	0.963707
Water intake rate =	0.0033
Site Area =	2330
Area Use Factor (AUF) =	1
Exposure Duration (ED) =	1

Table E-9
Tier 1 COPCs
EEQs and Hazard Indices for the Red Fox at LHAAP
Industrial Sub-Area/Goose Praire Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Total Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
								-----------	-----------	-----------	-----Unitless-----	-----------	-----------	-----------	
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00
2,3,7,8-TCDD TEQ	8.59E-09	mg/L	1.56E-06	mg/kg	7.62E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L		mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00
4,4'-DDD	0.00E+00	mg/L	2.97E-03	mg/kg	1.88E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.72E-02	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01
4,4'-DDT	0.00E+00	mg/L	3.04E-03	mg/kg	6.89E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.82E-03	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.60E-03	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Aluminum	2.10E+00	mg/L	1.03E+04	mg/kg	9.54E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.10E+00	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	7.40E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.32E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00
Aroclor 1254	0.00E+00	mg/L	5.10E-02	mg/kg	5.39E-02	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.93E-02	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00
Barium	0.00E+00	mg/L	1.34E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00
bis(2-ethylhexyl)phthalate	2.43E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00
Cadmium	0.00E+00	mg/L	5.24E-01	mg/kg	8.87E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	1.77E+01	8.28E-01	6.53E-01	6.53E-01	9.22E-01	9.22E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.83E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.88E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.91E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Copper	1.42E-02	mg/L	1.27E+01	mg/kg	1.76E+01	mg/kg	1.00E+00	5.92E+03	5.25E+00	6.83E-01	4.15E-01	3.39E-01	3.39E-01	1.49E-01	1.49E-01
Dieldrin	0.00E+00	mg/L	3.00E-03	mg/kg	1.70E-03	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	4.03E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	5.38E-03	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	1.87E-04	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E-02	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00
Iron	3.14E+00	mg/L	0.00E+00	mg/kg	1.74E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01		
Lead	7.76E-03	mg/L	7.66E+01	mg/kg	4.75E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	3.89E-01	3.92E-02	4.84E-02	4.84E-02	1.33E-02	1.33E-02
Manganese	2.73E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+03	2.10E+00	NA	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.89E-01	mg/kg	1.00E+00		2.87E+00	1.54E+00	NA	4.69E-01	4.69E-01	1.03E-01	1.03E-01
Mercury (methyl)	0.00E+00	mg/L	2.65E-01	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	6.78E-01	NA	NA		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00
Nickel	0.00E+00	mg/L	0.00E+00	mg/kg	1.07E+01	mg/kg	1.00E+00		2.32E+00	4.73E+00	NA	6.00E-02	6.00E-02	1.01E-01	1.01E-01
Nitrate	8.86E-01	mg/L	0.00E+00	mg/kg	1.86E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Nitrate/Nitrite	8.12E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	8.77E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	3.79E+00	mg/kg	1.00E+00			1.14E+00	NA	6.44E+00	6.44E+00	1.66E-01	1.66E-01
Selenium	3.74E-03	mg/L	1.29E+00	mg/kg	1.50E+00	mg/kg	1.00E+00	2.05E+02	4.50E+00	8.32E-01	5.20E-01	5.28E-01	5.28E-01	1.95E-01	1.95E-01
Silver	0.00E+00	mg/L	2.66E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	5.39E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Sulfate	1.42E+01	mg/L	6.05E+00	mg/kg	1.35E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Thallium	1.70E-03	mg/L	7.02E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	4.15E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Vanadium	0.00E+00	mg/L	0.00E+00	mg/kg	2.60E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03
Zinc	8.78E-02	mg/L	9.41E+01	mg/kg	6.16E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.36E+00	6.57E-01	7.92E-01	7.92E-01	4.51E-01	4.51E-01

Chemical	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L
	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d	
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00
1,3-Dinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00
2,3,7,8-TCDD TEQ	7.25E-10	0.00E+00	7.21E-09	0.00E+00	0.00E+00	1.72E-07	0.00E+00	1.40E-10	0.00E+00	1.10E-08	2.35E-09	1.93E-07	1.00E-06	1.93E-01	1.00E-05	1.93E-02
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00
2,4-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00
2,6-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00
4,4'-DDD	0.00E+00	0.00E+00	1.78E-06	0.00E+00	0.00E+00	2.95E-05	0.00E+00	6.08E-07	0.00E+00	5.11E-05	1.10E-05	9.40E-05	8.00E-01	1.17E-04	4.00E+00	2.35E-05
4,4'-DDE	0.00E+00	0.00E+00	1.63E-05	0.00E+00	0.00E+00	2.72E-04	0.00E+00	4.33E-05	0.00E+00	4.05E-04	8.68E-05	8.24E-04	8.00E-01	1.03E-03	4.00E+00	2.06E-04
4,4'-DDT	0.00E+00	0.00E+00	6.53E-06	0.00E+00	0.00E+00	1.12E-04	0.00E+00	2.24E-06	0.00E+00	2.71E-04	5.81E-05	4.50E-04	8.00E-01	5.63E-04	4.00E+00	1.13E-04
Aldrin	0.00E+00	0.00E+00	2.67E-06	0.00E+00	0.00E+00	4.59E-05	0.00E+00	7.75E-08	0.00E+00	7.68E-05	1.65E-05	1.42E-04	2.00E-01	7.10E-04	1.00E+00	1.42E-04
alpha-Chlordane	0.00E+00	0.00E+00	2.47E-06	0.00E+00	0.00E+00	4.16E-05	0.00E+00	4.26E-07	0.00E+00	7.10E-05	1.52E-05	1.31E-04	4.58E+00	2.85E-05	9.16E+00	1.43E-05
Aluminum	1.77E-01	0.00E+00	9.03E+00	0.00E+00	0.00E+00	1.14E+00	0.00E+00	8.89E-02	0.00E+00	1.95E+00	4.18E-01	1.28E+01	1.93E+00	6.64E+00	1.93E+01	6.64E-01
Antimony	0.00E+00	0.00E+00	1.99E-03	0.00E+00	0.00E+00	2.43E-03	0.00E+00	5.97E-04	0.00E+00	8.27E-03	1.77E-03	1.51E-02	1.25E-01	1.21E-01	1.25E+00	1.21E-02
Aroclor 1242	0.00E+00	0.00E+00	7.00E-06	0.00E+00	0.00E+00	1.18E-04	0.00E+00	4.89E-06	0.00E+00	2.01E-04	4.32E-05	3.75E-04	6.85E-02	5.47E-03	6.85E-01	5.47E-04
Aroclor 1248	0.00E+00	0.00E+00	1.25E-06	0.00E+00	0.00E+00	2.12E-05	0.00E+00	5.41E-08	0.00E+00	3.60E-05	7.71E-06	6.61E-05	6.80E-02	9.73E-04	6.90E-01	9.59E-05
Aroclor 1254	0.00E+00	0.00E+00	5.11E-05	0.00E+00	0.00E+00	8.85E-04	0.00E+00	1.93E-06	0.00E+00	1.35E-03	2.90E-04	2.58E-03	6.80E-02	3.80E-02	6.90E-01	3.74E-03
Aroclor 1260	0.00E+00	0.00E+00	1.82E-05	0.00E+00	0.00E+00	3.33E-04	0.00E+00	3.55E-07	0.00E+00	8.74E-04	1.87E-04	1.41E-03	6.80E-02	2.08E-02	6.90E-01	2.05E-03
Aroclor 1268	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.90E-01	0.00E+00
Barium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E+00	0.00E+00	1.98E+01	0.00E+00
Benzoic Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00
bis(2-ethylhexyl)phthalate	2.05E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.05E-03	1.83E+01	1.12E-04	1.83E+02	1.12E-05
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00
Cadmium	0.00E+00	0.00E+00	8.40E-04	0.00E+00	0.00E+00	1.59E-02	0.00E+00	2.35E-03	0.00E+00	1.94E-02	4.15E-03	4.26E-02	1.00E+00	4.26E-02	1.00E+01	4.26E-03
Chlordane	0.00E+00	0.00E+00	1.73E-07	0.00E+00	0.00E+00	2.92E-06	0.00E+00	2.98E-08	0.00E+00	4.97E-06	1.07E-06	9.16E-06	4.58E+00	2.00E-06	9.16E+00	1.00E-06
Chromium	0.00E+00	0.00E+00	1.78E-02	0.00E+00	0.00E+00	6.01E-02	0.00E+00	3.65E-02	0.00E+00	1.48E-01	3.17E-02	2.94E-01	3.28E+00	8.96E-02	1.31E+01	2.24E-02
cis-Nonachlor	0.00E+00	0.00E+00	3.70E-07	0.00E+00	0.00E+00	6.24E-06	0.00E+00	6.39E-08	0.00E+00	1.07E-05	2.28E-06	1.96E-05	4.58E+00	4.28E-06	9.16E+00	2.14E-06
Copper	1.20E-03	0.00E+00	1.67E-02	0.00E+00	0.00E+00	1.22E-02	0.00E+00	2.43E-02	0.00E+00	6.23E-02	1.33E-02	1.30E-01	1.17E+01	1.11E-02	1.51E+01	8.58E-03
Dieldrin	0.00E+00	0.00E+00	1.61E-06	0.00E+00	0.00E+00	2.64E-05	0.00E+00	1.13E-05	0.00E+00	4.64E-05	9.95E-06	9.57E-05	2.00E-02	4.79E-03	2.00E-01	4.79E-04
Endrin	0.00E+00	0.00E+00	3.82E-07	0.00E+00	0.00E+00	6.24E-06	0.00E+00	6.25E-08	0.00E+00	1.16E-05	2.49E-06	2.08E-05	9.20E-02	2.26E-04	9.20E-01	2.26E-05
gamma-Chlordane	0.00E+00	0.00E+00	5.09E-06	0.00E+00	0.00E+00	8.59E-05	0.00E+00	8.79E-07	0.00E+00	1.47E-04	3.14E-05	2.70E-04	4.58E+00	5.89E-05	9.16E+00	2.94E-05
Heptachlor	0.00E+00	0.00E+00	1.77E-07	0.00E+00	0.00E+00	2.93E-06	0.00E+00	1.20E-08	0.00E+00	5.09E-06	1.09E-06	9.30E-06	1.00E-01	9.30E-05	1.00E+00	9.30E-06
Hexachlorobenzene	0.00E+00	0.00E+00	1.62E-05	0.00E+00	0.00E+00	2.70E-04	0.00E+00	1.31E-06	0.00E+00	4.67E-04	1.00E-04	8.54E-04	8.00E-02	1.07E-02	2.90E-01	2.95E-03
HMX	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00
Iron	2.65E-01	0.00E+00	1.65E+01	0.00E+00	0.00E+00	1.37E+00	0.00E+00	2.82E-01	0.00E+00	8.50E-01	1.82E-01	1.94E+01	NA	NA	NA	NA
Isobutanol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Lead	6.56E-04	0.00E+00	4.50E-02	0.00E+00	0.00E+00	1.87E-02	0.00E+00	9.31E-03	0.00E+00	1.49E-02	3.20E-03	9.18E-02	8.00E+00	1.15E-02	8.00E+01	1.15E-03
Manganese	2.31E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.31E-02	8.80E+01	2.62E-04	2.84E+02	8.12E-05
Mercury (inorganic)	0.00E+00	0.00E+00	5.58E-04	0.00E+00	0.00E+00	9.20E-04	NA	1.12E-03	0.00E+00	1.43E-03	3.07E-04	4.34E-03	1.00E+00	4.34E-03	3.00E+00	1.45E-03
Mercury (methyl)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	1.50E-02	0.00E+00	2.50E-02	0.00E+00
Mirex	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	7.00E-01	0.00E+00
Nickel	0.00E+00	0.00E+00	1.02E-02	0.00E+00	0.00E+00	5.15E-02	NA	2.61E-03	0.00E+00	2.57E-02	5.50E-03	9.54E-02	4.00E+01	2.38E-03	8.00E+01	1.19E-03
Nitrate	7.48E-02	0.00E+00	1.76E-03	0.00E+00	0.00E+00	2.15E-03	0.00E+00	2.64E-03	0.00E+00	7.30E-03	1.56E-03	9.02E-02	5.07E+02	1.78E-04	1.13E+03	7.98E-05
Nitrate/Nitrite	6.86E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.86E-03	5.07E+02	1.35E-05	1.13E+03	6.07E-06
Oxychlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00
p-Isopropyltoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00
Pentachloroanisole	0.00E+00	0.00E+00	8.31E-07	0.00E+00	0.00E+00	1.35E-05	0.00E+00	1.19E-07	0.00E+00	2.39E-05	5.12E-06	4.35E-05	2.40E-01	1.81E-04	2.40E+00	1.81E-05
Pentachlorophenol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00
Perchlorate	0.00E+00	0.00E+00	3.59E-03	0.00E+00	0.00E+00	4.37E-03	NA	9.89E-02	0.00E+00	1.49E-02	3.19E-03	1.25E-01	8.50E+00	1.47E-02	2.55E+01	4.90E-03
Selenium	3.16E-04	0.00E+00	1.42E-03	0.00E+00	0.00E+00	1.26E-03	0.00E+00	3.20E-03	0.00E+00	6.91E-03	1.48E-03	1.46E-02	2.00E-01	7.30E-02	3.30E-01	4.42E-02
Silver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00
Strontium	0.00E+00	0.00E+00	5.11E-02	0.00E+00	0.00E+00	1.52E-02	0.00E+00	7.65E-02	0.00E+00	2.12E-01	4.54E-02	4.00E-01	2.63E+02	1.52E-03	7.89E+02	5.07E-04
Sulfate	1.20E-01	0.00E+00	1.28E-01	0.00E+00	0.00E+00	1.56E-01	0.00E+00	1.91E-01	0.00E+00	5.30E-01	1.14E-01	2.32E+00	NA	NA	NA	NA
Thallium	1.44E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.44E-04	7.40E-03	1.94E-02	7.40E-02	1.94E-03
trans-Nonachlor	0.00E+00	0.00E+00	3.93E-07	0.00E+00	0.00E+00	6.63E-06	0.00E+00	6.79E-08	0.00E+00	1.13E-05	2.43E-06	2.08E-05	4.58E+00	4.55E-06	9.16E+00	2.27E-06
Vanadium	0.00E+00	0.00E+00	2.46E-02	0.00E+00	0.00E+00	2.32E-03	0.00E+00	4.22E-04	0.00E+00	3.64E-03	7.80E-04	3.18E-02	2.10E-01	1.51E-01	2.10E+00	1.51E-02
Zinc	7.41E-03	0.00E+00	5.84E-02	0.00E+00	0.00E+00	3.35E-01	0.00E+00	1.98E-01	0.00E+00	6.57E-01	1.41E-01	1.40E+00	1.60E+02	8.72E-03	3.20E+02	4.36E-03

	EEQ N	EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.9E-04	5.8E-05
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	1.7E-03	3.4E-04
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	6.5E-02	6.4E-03
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	1.1E-04	1.1E-05
Aldrin/Dieldrin/Endrin EEQ:	5.7E-03	6.4E-04

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors	
Terrestrial plant diet fraction =	0.12
Aquatic plant diet fraction =	0
Plant root diet fraction =	0
Fish diet fraction =	0
Aq. Invert diet fraction =	0
Terr. Invert diet fraction =	0.03
Mammal diet fraction =	0.7
Bird diet fraction =	0.15
Soil ingestion rate =	0.004263
Sediment ingestion rate =	0
Food ingestion rate =	0.152
Body weight =	4.5
Home range =	247.1044
Water intake rate =	0.38
Site Area =	2330
Area Use Factor (AUF) =	1
Exposure Duration (ED) =	1

Table E-10
Tier 2 COPCs
EEQs and Hazard Indices for the Red Fox at LHAAP
Industrial Sub-Area/Goose Praire Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Total Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L
									----------Unitless----------							mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d	
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00
2,3,7,8-TCDD TEQ	7.00E-09	mg/L	1.27E-06	mg/kg	5.82E-06	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	5.37E-10	0.00E+00	5.00E-09	0.00E+00	0.00E+00	5.89E-08	0.00E+00	8.30E-11	0.00E+00	5.90E-09	1.27E-09	7.17E-08	1.00E-06	7.17E-02	1.00E-05	7.17E-03
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00
4,4'-DDD	0.00E+00	mg/L	2.56E-03	mg/kg	1.64E-03	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.41E-06	0.00E+00	0.00E+00	1.35E-05	0.00E+00	1.69E-07	0.00E+00	3.09E-05	6.62E-06	5.26E-05	8.00E-01	6.57E-05	4.00E+00	1.31E-05
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.20E-02	mg/kg	1.00E+00		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	1.03E-05	0.00E+00	0.00E+00	9.92E-05	0.00E+00	6.00E-06	0.00E+00	2.42E-04	5.19E-05	4.10E-04	8.00E-01	5.12E-04	4.00E+00	1.02E-04
4,4'-DDT	0.00E+00	mg/L	2.61E-03	mg/kg	5.57E-03	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	4.79E-06	0.00E+00	0.00E+00	4.75E-05	0.00E+00	5.74E-07	0.00E+00	1.06E-04	2.27E-05	1.82E-04	8.00E-01	2.27E-04	4.00E+00	4.54E-05
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-03	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.51E-06	0.00E+00	0.00E+00	1.50E-05	0.00E+00	3.14E-08	0.00E+00	3.31E-05	7.09E-06	5.67E-05	2.00E-01	2.84E-04	1.00E+00	5.67E-05
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.34E-03	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.16E-06	0.00E+00	0.00E+00	1.12E-05	0.00E+00	4.61E-08	0.00E+00	2.53E-05	5.42E-06	4.31E-05	4.58E+00	9.42E-06	9.16E+00	4.71E-06
Aluminum	1.73E+00	mg/L	8.98E+03	mg/kg	8.99E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	1.33E-01	0.00E+00	7.74E+00	0.00E+00	0.00E+00	3.56E-01	0.00E+00	4.97E-02	0.00E+00	1.28E+00	2.74E-01	9.83E+00	1.93E+00	5.09E+00	1.93E+01	5.09E-01
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.05E+00	mg/kg	1.00E+00			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	1.77E-03	0.00E+00	0.00E+00	5.67E-04	0.00E+00	2.79E-04	0.00E+00	4.88E-03	1.05E-03	8.54E-03	1.25E-01	6.83E-02	1.25E+00	6.83E-03
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	6.31E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	5.43E-06	0.00E+00	0.00E+00	5.30E-05	0.00E+00	1.95E-07	0.00E+00	1.19E-04	2.55E-05	2.03E-04	6.85E-02	2.96E-03	6.85E-01	2.96E-04
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.11E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	9.51E-07	0.00E+00	0.00E+00	9.27E-06	0.00E+00	3.41E-08	0.00E+00	2.08E-05	4.46E-06	3.55E-05	6.80E-02	5.22E-04	6.90E-01	5.15E-05
Aroclor 1254	0.00E+00	mg/L	4.20E-02	mg/kg	3.78E-02	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	3.25E-05	0.00E+00	0.00E+00	3.25E-04	0.00E+00	4.98E-07	0.00E+00	4.04E-04	8.66E-05	8.49E-04	6.80E-02	1.25E-02	6.90E-01	1.23E-03
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.70E-02	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	1.47E-05	0.00E+00	0.00E+00	1.54E-04	0.00E+00	4.03E-08	0.00E+00	6.11E-04	1.31E-04	9.11E-04	6.80E-02	1.34E-02	6.90E-01	1.32E-03
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.90E-01	0.00E+00
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E+00	0.00E+00	1.98E+01	0.00E+00
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00
bis(2-ethylhexyl)phthalate	1.43E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	1.10E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E-03	1.83E+01	5.98E-05	1.83E+02	5.99E-06
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00
Cadmium	0.00E+00	mg/L	4.84E-01	mg/kg	7.47E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	1.91E+01	8.58E-01	7.06E-01	7.06E-01	6.72E-01	6.72E-01	0.00E+00	0.00E+00	6.42E-04	0.00E+00	0.00E+00	1.32E-02	0.00E+00	1.94E-03	0.00E+00	1.08E-02	2.31E-03	2.88E-02	1.00E+00	2.88E-02	1.00E+01	2.88E-03
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.60E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.37E-07	0.00E+00	0.00E+00	1.33E-06	0.00E+00	5.48E-09	0.00E+00	3.00E-06	6.43E-07	5.12E-06	4.58E+00	1.12E-06	9.16E+00	5.59E-07
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	0.00E+00	0.00E+00	1.52E-02	0.00E+00	0.00E+00	4.97E-03	0.00E+00	2.66E-03	0.00E+00	3.21E-02	6.87E-03	6.18E-02	3.28E+00	1.88E-02	1.31E+01	4.70E-03
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.70E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.32E-07	0.00E+00	0.00E+00	2.26E-06	0.00E+00	9.26E-09	0.00E+00	5.08E-06	1.09E-06	8.66E-06	4.58E+00	1.89E-06	9.16E+00	9.46E-07
Copper	1.23E-02	mg/L	1.08E+01	mg/kg	1.33E+01	mg/kg	1.00E+00	1.11E+03	1.56E+00	8.47E-01	4.57E-01	4.03E-01	4.03E-01	8.97E-02	8.97E-02	9.40E-04	0.00E+00	1.14E-02	0.00E+00	0.00E+00	1.04E-02	0.00E+00	1.97E-02	0.00E+00	2.56E-02	5.49E-03	7.36E-02	1.17E+01	6.29E-03	1.51E+01	4.86E-03
Dieldrin	0.00E+00	mg/L	2.57E-03	mg/kg	1.51E-03	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.30E-06	0.00E+00	0.00E+00	1.23E-05	0.00E+00	1.34E-07	0.00E+00	2.85E-05	6.11E-06	4.83E-05	2.00E-02	2.42E-03	2.00E-01	2.42E-04
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.95E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	2.54E-07	0.00E+00	0.00E+00	2.39E-06	0.00E+00	2.98E-08	0.00E+00	7.69E-06	1.65E-06	1.20E-05	9.20E-02	1.31E-04	9.20E-01	1.31E-05
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.61E-03	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.10E-06	0.00E+00	0.00E+00	3.02E-05	0.00E+00	1.24E-07	0.00E+00	6.79E-05	1.45E-05	1.16E-04	4.58E+00	2.53E-05	9.16E+00	1.26E-05
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	1.65E-04	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.42E-07	0.00E+00	0.00E+00	1.36E-06	0.00E+00	6.99E-09	0.00E+00	3.10E-06	6.64E-07	5.26E-06	1.00E-01	5.26E-05	1.00E+00	5.26E-06
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.48E-02	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.27E-05	0.00E+00	0.00E+00	1.22E-04	0.00E+00	8.64E-07	0.00E+00	2.78E-04	5.96E-05	4.73E-04	8.00E-02	5.91E-03	2.90E-01	1.63E-03
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00
Iron	2.68E+00	mg/L	0.00E+00	mg/kg	1.64E+04	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	2.06E-01	0.00E+00	1.41E+01	0.00E+00	0.00E+00	5.44E-01	0.00E+00	2.42E-01	0.00E+00	6.20E-01	1.33E-01	1.59E+01	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Lead	6.26E-03	mg/L	5.97E+01	mg/kg	3.99E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	4.02E-01	4.37E-02	5.22E-02	5.22E-02	1.16E-02	1.16E-02	4.80E-04	0.00E+00	3.44E-02	0.00E+00	0.00E+00	1.48E-02	0.00E+00	7.68E-03	0.00E+00	9.98E-03	2.14E-03	6.94E-02	8.00E+00	8.68E-03	8.00E+01	8.68E-04
Manganese	2.12E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.50E+02	4.20E-01	NA	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	1.63E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.63E-02	8.80E+01	1.85E-04	2.84E+02	5.73E-05
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	2.65E-01	mg/kg	1.00E+00		1.14E+00	2.63E+00	NA	6.77E-01	6.77E-01	9.15E-02	9.15E-02	0.00E+00	0.00E+00	2.28E-04	0.00E+00	0.00E+00	6.42E-04	NA	6.62E-04	0.00E+00	5.21E-04	1.12E-04	2.16E-03	1.00E+00	2.16E-03	3.00E+00	7.22E-04
Mercury (methyl)	0.00E+00	mg/L	2.09E-01	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	7.56E-01	NA	NA			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	1.50E-02	0.00E+00	2.50E-02	0.00E+00
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	7.00E-01	0.00E+00
Nickel	0.00E+00	mg/L	0.00E+00	mg/kg	9.95E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	NA	6.11E-02	6.11E-02	8.71E-02	8.71E-02	0.00E+00	0.00E+00	8.57E-03	0.00E+00	0.00E+00	9.70E-03	NA	2.24E-03	0.00E+00	1.86E-02	3.99E-03	4.31E-02	4.00E+01	1.08E-03	8.00E+01	5.39E-04
Nitrate	4.70E-01	mg/L	0.00E+00	mg/kg	1.21E+00	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	3.61E-02	0.00E+00	1.04E-03	0.00E+00	0.00E+00	3.33E-04	0.00E+00	9.32E-04	0.00E+00	2.87E-03	6.15E-04	4.19E-02	5.07E+02	8.26E-05	1.13E+03	3.70E-05
Nitrate/Nitrite	6.18E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02								4.74E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.74E-03	5.07E+02	9.36E-06	1.13E+03	4.20E-06
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.07E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.36E-07	0.00E+00	0.00E+00	4.08E-06	0.00E+00	5.12E-08	0.00E+00	9.54E-06	2.04E-06	1.62E-05	2.40E-01	6.73E-05	2.40E+00	6.73E-06
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.93E+00	mg/kg	1.00E+00			3.00E-01	NA	7.16E+00	7.16E+00	1.11E-01	1.11E-01	0.00E+00	0.00E+00	2.52E-03	0.00E+00	0.00E+00	8.09E-04	NA	7.72E-02	0.00E+00	6.96E-03	1.49E-03	8.90E-02	8.50E+00	1.05E-02	2.55E+01	3.49E-03
Selenium	3.23E-03	mg/L	1.10E+00	mg/kg	1.17E+00	mg/kg	1.00E+00	2.05E+02	4.50E+00	8.89E-01	5.12E-01	5.15E-01	5.15E-01	1.51E-01	1.51E-01	2.47E-04	0.00E+00	1.01E-03	0.00E+00	0.00E+00	9.59E-04	0.00E+00	2.22E-03	0.00E+00	3.80E-03	8.15E-04	9.05E-03	2.00E-01	4.53E-02	3.30E-01	2.74E-02
Silver	0.00E+00	mg/L	2.05E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00
Strontium	0.00E+00	mg/L	4.59E+00	mg/kg	3.84E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	3.30E-02	0.00E+00	0.00E+00	3.08E-03	0.00E+00	2.97E-02	0.00E+00	9.13E-02	1.96E-02	1.77E-01	2.63E+02	6.72E-04	7.89E+02	2.24E-04
Sulfate	1.10E+01	mg/L	0.00E+00	mg/kg	9.41E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	8.45E-01	0.00E+00	8.09E-02	0.00E+00	0.00E+00	2.60E-02	0.00E+00	7.27E-02	0.00E+00	2.24E-01	4.79E-02	1.30E+00	NA	NA	NA	NA
Thallium	1.00E-03	mg/L	6.22E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00							7.69E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.69E-05	7.40E-03	1.04E-02	7.40E-02	1.04E-03
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.72E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.34E-07	0.00E+00	0.00E+00	2.27E-06	0.00E+00	9.32E-09	0.00E+00	5.11E-06	1.10E-06	8.72E-06	4.58E+00	1.90E-06	9.16E+00	9.52E-07
Vanadium	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	0.00E+00	0.00E+00	2.14E-02	0.00E+00	0.00E+00	9.60E-04	0.00E+00	3.29E-04	0.00E+00	2.93E-03	6.27E-04	2.62E-02	2.10E-01	1.25E-01	2.10E+00	1.25E-02
Zinc	6.50E-02	mg/L	7.78E+01	mg/kg	5.34E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	5.90E+00	7.15E-01	8.44E-01	8.44E-01	1.84E-01	1.84E-01	4.99E-03	0.00E+00	4.59E-02	0.00E+00	0.00E+00	2.90E-01	0.00E+00	1.66E-01	0.00E+00	2.11E-01	4.53E-02	7.63E-01	1.60E+02	4.77E-03	3.20E+02	2.38E-03

	EEQ N	EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	9.2E-05	2.5E-05
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	8.1E-04	1.6E-04
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	2.9E-02	2.9E-03
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	6.0E-05	6.0E-06
Aldrin/Dieldrin/Endrin EEQ:	2.8E-03	3.1E-04

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value
Terrestrial plant diet fraction =	0.12
Aquatic plant diet fraction =	0
Plant root diet fraction =	0
Fish diet fraction =	0
Aq. Invert diet fraction =	0
Terr. Invert diet fraction =	0.03
Mammal diet fraction =	0.7
Bird diet fraction =	0.15
Soil ingestion rate =	0.004263
Sediment ingestion rate =	0
Food ingestion rate =	0.152
Body weight =	4.5
Home range =	2565
Water intake rate =	0.38
Site Area =	2330
Area Use Factor (AUF) =	0.908382
Exposure Duration (ED) =	1

Table E-11
Tier 1 COPCs
EEQs and Hazard Indices for the Muskrat at LHAAP
Industrial Sub-Area/Goose Praire Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L
							---Unitless---									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d	
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00
2,3,7,8-TCDD TEQ	8.59E-09	mg/L	1.56E-06	mg/kg	9.34E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	8.34E-10	1.08E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.34E-10	3.11E-10	2.34E-10	0.00E+00	0.00E+00	1.24E-08	1.00E-06	1.24E-02	1.00E-05	1.24E-03
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00
4,4'-DDD	0.00E+00	mg/L	2.97E-03	mg/kg	1.77E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	2.05E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.85E-06	1.04E-06	7.85E-06	0.00E+00	0.00E+00	3.73E-05	8.00E-01	4.66E-05	4.00E+00	9.31E-06
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.82E-02	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.28E-05	0.00E+00	0.00E+00	0.00E+00	8.28E-05	8.00E-01	1.03E-04	4.00E+00	2.07E-05
4,4'-DDT	0.00E+00	mg/L	3.04E-03	mg/kg	6.08E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	2.10E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.03E-06	3.57E-06	8.03E-06	0.00E+00	0.00E+00	4.06E-05	8.00E-01	5.08E-05	4.00E+00	1.02E-05
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.50E-03	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.46E-08	0.00E+00	0.00E+00	0.00E+00	7.46E-08	2.00E-01	3.73E-07	1.00E+00	7.46E-08
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.08E-03	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.15E-07	0.00E+00	0.00E+00	0.00E+00	6.15E-07	4.58E+00	1.34E-07	9.16E+00	6.71E-08
Aluminum	2.10E+00	mg/L	1.03E+04	mg/kg	7.38E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	2.04E-01	7.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.81E-01	1.25E-01	7.81E-01	0.00E+00	0.00E+00	7.29E+01	1.93E+00	3.77E+01	1.93E+01	3.77E+00
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E+00	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E-03	0.00E+00	0.00E+00	0.00E+00	1.30E-03	1.25E-01	1.04E-02	1.25E+00	1.04E-03
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	6.94E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.31E-06	0.00E+00	0.00E+00	0.00E+00	8.31E-06	6.85E-02	1.21E-04	6.85E-01	1.21E-05
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.45E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.08E-07	0.00E+00	0.00E+00	0.00E+00	1.08E-07	6.80E-02	1.58E-06	6.80E-01	1.58E-07
Aroclor 1254	0.00E+00	mg/L	5.10E-02	mg/kg	5.66E-02	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	3.52E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.49E-05	3.67E-06	1.49E-05	0.00E+00	0.00E+00	3.85E-04	6.80E-02	5.66E-03	6.80E-01	5.66E-04
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.69E-02	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.64E-07	0.00E+00	0.00E+00	0.00E+00	5.64E-07	6.80E-02	8.30E-06	6.80E-01	8.30E-07
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.80E-01	0.00E+00
Barium	0.00E+00	mg/L	1.34E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	9.22E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.06E+00	0.00E+00	4.06E+00	0.00E+00	0.00E+00	9.05E+00	5.10E+00	1.77E+00	1.98E+01	4.57E-01
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00
bis(2-ethylhexyl)phthalate	2.43E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	2.36E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.36E-03	1.83E+01	1.29E-04	1.83E+02	1.29E-05
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00
Cadmium	0.00E+00	mg/L	5.24E-01	mg/kg	4.03E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.52E+01	8.28E-01	9.31E-01	8.28E-01	9.22E-01	9.22E-01	0.00E+00	3.61E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.43E-02	2.75E-03	1.43E-02	0.00E+00	0.00E+00	3.50E-02	1.00E+00	3.50E-02	1.00E+01	3.50E-03
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.84E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E-08	0.00E+00	0.00E+00	0.00E+00	5.44E-08	4.58E+00	1.19E-08	9.16E+00	5.94E-09
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.82E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.40E-02	0.00E+00	0.00E+00	0.00E+00	6.40E-02	3.28E+00	1.95E-02	1.31E+01	4.87E-03
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.40E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.01E-07	0.00E+00	0.00E+00	0.00E+00	1.01E-07	4.58E+00	2.20E-08	9.16E+00	1.10E-08
Copper	1.42E-02	mg/L	1.27E+01	mg/kg	1.87E+01	mg/kg	1.00E+00	5.92E+03	5.25E+00	6.54E-01	4.15E-01	3.28E-01	4.15E-01	1.49E-01	1.49E-01	1.38E-03	8.73E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E-01	4.49E-02	1.74E-01	0.00E+00	0.00E+00	4.81E-01	1.17E+01	4.11E-02	1.51E+01	3.18E-02
Dieldrin	0.00E+00	mg/L	3.00E-03	mg/kg	3.29E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	2.07E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.62E-04	3.96E-06	1.62E-04	0.00E+00	0.00E+00	3.49E-04	2.00E-02	1.75E-02	2.00E-01	1.75E-03
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.80E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E-07	0.00E+00	0.00E+00	0.00E+00	1.07E-07	9.20E-02	1.16E-06	9.20E-01	1.16E-07
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	9.74E-03	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.88E-06	0.00E+00	0.00E+00	0.00E+00	2.88E-06	4.58E+00	6.29E-07	9.16E+00	3.14E-07
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.11E-04	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.46E-08	0.00E+00	0.00E+00	0.00E+00	2.46E-08	1.00E-01	2.46E-07	1.00E+00	2.46E-08
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.77E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.45E-08	0.00E+00	0.00E+00	0.00E+00	2.45E-08	8.00E-02	3.07E-07	2.90E-01	8.46E-08
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00
Iron	3.14E+00	mg/L	0.00E+00	mg/kg	1.68E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	3.05E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.93E-01	0.00E+00	0.00E+00	0.00E+00	7.99E-01	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Lead	7.76E-03	mg/L	7.66E+01	mg/kg	7.30E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	3.59E-01	3.92E-02	4.00E-02	3.92E-02	1.33E-02	1.33E-02	7.54E-04	5.28E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.91E-02	2.14E-02	9.91E-02	0.00E+00	0.00E+00	7.48E-01	8.00E+00	9.35E-02	8.00E+01	9.35E-03
Manganese	2.73E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+03	2.10E+00	NA	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	2.65E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.65E-02	8.80E+01	3.01E-04	2.84E+02	9.33E-05
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	7.96E-01	mg/kg	1.00E+00		2.87E+00	1.26E+00	NA	4.09E-01	NA	1.03E-01	1.03E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	2.38E-03	NA	0.00E+00	0.00E+00	2.38E-03	1.32E+01	1.81E-04	3.96E+01	6.02E-05
Mercury (methyl)	0.00E+00	mg/L	2.65E-01	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	6.78E-01	NA	6.78E-01			0.00E+00	1.82E-03	0.00E+00	0.00E+00	0.00E+00	NA	5.92E-03	NA	5.92E-03	0.00E+00	0.00E+00	1.37E-02	3.20E-02	4.27E-01	1.60E-01	8.54E-02
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	7.00E-01	0.00E+00
Nickel	0.00E+00	mg/L	0.00E+00	mg/kg	8.88E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	NA	6.29E-02	NA	1.01E-01	1.01E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	4.10E-03	NA	0.00E+00	0.00E+00	4.10E-03	4.00E+01	1.02E-04	8.00E+01	5.12E-05
Nitrate	8.86E-01	mg/L	0.00E+00	mg/kg	1.12E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	8.60E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.87E-03	0.00E+00	0.00E+00	0.00E+00	8.89E-02	5.07E+02	1.75E-04	1.13E+03	7.87E-05
Nitrate/Nitrite	8.12E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03								7.88E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.88E-03	5.07E+02	1.55E-05	1.13E+03	6.98E-06
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	7.16E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.76E-07	0.00E+00	0.00E+00	0.00E+00	1.76E-07	2.40E-01	7.33E-07	2.40E+00	7.33E-08
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	3.62E+00	mg/kg	1.00E+00			1.14E+00	NA	6.57E+00	6.57E+00	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	1.74E-01	0.00E+00	0.00E+00	0.00E+00	1.74E-01	8.50E+00	2.05E-02	2.55E+01	6.83E-03
Selenium	3.74E-03	mg/L	1.29E+00	mg/kg	2.63E+00	mg/kg	1.00E+00	2.05E+02	4.50E+00	7.15E-01	5.20E-01	5.58E-01	5.20E-01	1.95E-01	1.95E-01	3.63E-04	8.90E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.21E-02	1.08E-02	2.21E-02	0.00E+00	0.00E+00	6.43E-02	2.00E-01	3.21E-01	3.30E-01	1.95E-01
Silver	0.00E+00	mg/L	2.66E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	1.83E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.49E-02	0.00E+00	1.49E-02	0.00E+00	0.00E+00	4.82E-02	1.90E+01	2.53E-03	5.70E+01	8.45E-04
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.65E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.81E-02	0.00E+00	0.00E+00	0.00E+00	6.81E-02	2.63E+02	2.59E-04	7.89E+02	8.63E-05
Sulfate	1.42E+01	mg/L	6.05E+00	mg/kg	1.75E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	1.38E+00	4.17E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.99E-02	4.50E-01	6.99E-02	0.00E+00	0.00E+00	2.02E+00	NA	NA	NA	NA
Thallium	1.70E-03	mg/L	7.02E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00							1.65E-04	4.84E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-03	7.40E-03	6.76E-01	7.40E-02	6.76E-02
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.59E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.06E-07	0.00E+00	0.00E+00	0.00E+00	1.06E-07	4.58E+00	2.32E-08	9.16E+00	1.16E-08
Vanadium	0.00E+00	mg/L	0.00E+00	mg/kg	2.54E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.45E-04	0.00E+00	0.00E+00	0.00E+00	7.45E-04	2.10E-01	3.55E-03	2.10E+00	3.55E-04
Zinc	8.78E-02	mg/L	9.41E+01	mg/kg	7.62E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	4.65E+00	6.57E-01	7.21E-01	6.57E-01	4.51E-01	4.51E-01	8.52E-03	6.48E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.04E+00	4.03E-01	2.04E+00	0.00E+00	0.00E+00	5.14E+00	1.60E+02	3.21E-02	3.20E+02	1.61E-02

	EEQ N	EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.1E-06	4.3E-07
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	2.0E-04	4.0E-05
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	5.8E-03	5.8E-04
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	1.3E-04	1.3E-05
Aldrin/Dieldrin/Endrin EEQ:	1.7E-02	1.7E-03

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\,x\,Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0.1
Aquatic plant diet fraction =	0.45
Plant root diet fraction =	0.45
Fish diet fraction =	0
Aq. Invert diet fraction =	0
Terr. Invert diet fraction =	0
Mammal diet fraction =	0
Bird diet fraction =	0
Soil ingestion rate =	0
Sediment ingestion rate =	0.008093
Food ingestion rate =	0.0861
Body weight =	1.174
Home range =	0.11861
Water intake rate =	0.114
Site Area =	246
Area Use Factor (AUF) =	1
Exposure Duration (ED) =	1

Table E-12
Tier 2 COPCs
EEQs and Hazard Indices for the Muskrat at LHAAP
Industrial Sub-Area/Goose Prairie Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L
							Unitless	Unitless	Unitless	Unitless	Unitless	Unitless	Unitless	Unitless	Unitless	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d	
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00
2,3,7,8-TCDD TEQ	7.00E-09	mg/L	1.27E-06	mg/kg	7.39E-06	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	6.80E-10	8.76E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.62E-10	2.10E-10	1.62E-10	0.00E+00	0.00E+00	9.97E-09	1.00E-06	9.97E-03	1.00E-05	9.97E-04
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00
4,4'-DDD	0.00E+00	mg/L	2.56E-03	mg/kg	1.51E-03	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	1.76E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.36E-06	3.09E-07	2.36E-06	0.00E+00	0.00E+00	2.27E-05	8.00E-01	2.84E-05	4.00E+00	5.67E-06
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E-02	mg/kg	1.00E+00		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.43E-05	0.00E+00	0.00E+00	0.00E+00	1.43E-05	8.00E-01	1.78E-05	4.00E+00	3.56E-06
4,4'-DDT	0.00E+00	mg/L	2.61E-03	mg/kg	4.99E-03	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	1.80E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.41E-06	1.02E-06	2.41E-06	0.00E+00	0.00E+00	2.39E-05	8.00E-01	2.98E-05	4.00E+00	5.96E-06
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.38E-03	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.92E-08	0.00E+00	0.00E+00	0.00E+00	4.92E-08	2.00E-01	2.46E-07	1.00E+00	4.92E-08
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.28E-03	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.78E-08	0.00E+00	0.00E+00	0.00E+00	8.78E-08	4.58E+00	1.92E-08	9.16E+00	9.58E-09
Aluminum	1.73E+00	mg/L	8.98E+03	mg/kg	7.05E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	1.68E-01	6.19E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.44E-01	7.75E-02	4.44E-01	0.00E+00	0.00E+00	6.30E+01	1.93E+00	3.27E+01	1.93E+01	3.27E+00
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E+00	mg/kg	1.00E+00			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.47E-04	0.00E+00	0.00E+00	0.00E+00	6.47E-04	1.25E-01	5.17E-03	1.25E+00	5.17E-04
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	5.90E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.63E-07	0.00E+00	0.00E+00	0.00E+00	3.63E-07	6.85E-02	5.29E-06	6.85E-01	5.29E-07
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.27E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.83E-08	0.00E+00	0.00E+00	0.00E+00	7.83E-08	6.80E-02	1.15E-06	6.80E-01	1.15E-07
Aroclor 1254	0.00E+00	mg/L	4.20E-02	mg/kg	4.34E-02	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	2.90E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.96E-06	1.14E-06	4.96E-06	0.00E+00	0.00E+00	3.01E-04	6.80E-02	4.42E-03	6.80E-01	4.42E-04
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.47E-02	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.94E-08	0.00E+00	0.00E+00	0.00E+00	6.94E-08	6.80E-02	1.02E-06	6.80E-01	1.02E-07
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.80E-01	0.00E+00
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	8.14E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.08E-01	0.00E+00	6.08E-01	0.00E+00	0.00E+00	2.03E+00	5.10E+00	3.98E-01	1.98E+01	1.03E-01
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00
bis(2-ethylhexyl)phthalate	1.43E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	1.39E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.39E-03	1.83E+01	7.56E-05	1.83E+02	7.58E-06
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00
Cadmium	0.00E+00	mg/L	4.84E-01	mg/kg	3.79E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	2.60E+01	8.58E-01	9.58E-01	8.58E-01	6.72E-01	6.72E-01	0.00E+00	3.34E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.37E-02	2.66E-03	1.37E-02	0.00E+00	0.00E+00	3.34E-02	1.00E+00	3.34E-02	1.00E+01	3.34E-03
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.60E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E-08	0.00E+00	0.00E+00	0.00E+00	1.09E-08	4.58E+00	2.38E-09	9.16E+00	1.19E-09
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.21E-03	0.00E+00	0.00E+00	0.00E+00	5.21E-03	3.28E+00	1.59E-03	1.31E+01	3.96E-04
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.76E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.89E-08	0.00E+00	0.00E+00	0.00E+00	1.89E-08	4.58E+00	4.12E-09	9.16E+00	2.06E-09
Copper	1.23E-02	mg/L	1.08E+01	mg/kg	1.76E+01	mg/kg	1.00E+00	1.11E+03	1.56E+00	6.85E-01	4.57E-01	3.40E-01	4.57E-01	8.97E-02	8.97E-02	1.19E-03	7.47E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.63E-01	4.38E-02	1.63E-01	0.00E+00	0.00E+00	4.46E-01	1.17E+01	3.82E-02	1.51E+01	2.95E-02
Dieldrin	0.00E+00	mg/L	2.57E-03	mg/kg	2.78E-04	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	1.77E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.04E-06	4.90E-08	2.04E-06	0.00E+00	0.00E+00	2.18E-05	2.00E-02	1.09E-03	2.00E-01	1.09E-04
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.31E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.66E-08	0.00E+00	0.00E+00	0.00E+00	6.66E-08	9.20E-02	7.24E-07	9.20E-01	7.24E-08
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-03	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.69E-07	0.00E+00	0.00E+00	0.00E+00	3.69E-07	4.58E+00	8.07E-08	9.16E+00	4.03E-08
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	1.86E-04	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.57E-08	0.00E+00	0.00E+00	0.00E+00	1.57E-08	1.00E-01	1.57E-07	1.00E+00	1.57E-08
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.54E-04	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.79E-08	0.00E+00	0.00E+00	0.00E+00	1.79E-08	8.00E-02	2.24E-07	2.90E-01	6.19E-08
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00
Iron	2.68E+00	mg/L	0.00E+00	mg/kg	1.59E+04	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	2.60E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.65E-01	0.00E+00	0.00E+00	0.00E+00	7.26E-01	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Lead	6.26E-03	mg/L	5.97E+01	mg/kg	6.49E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	3.67E-01	4.37E-02	4.22E-02	4.37E-02	1.16E-02	1.16E-02	6.08E-04	4.12E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.62E-02	2.01E-02	8.62E-02	0.00E+00	0.00E+00	6.05E-01	8.00E+00	7.56E-02	8.00E+01	7.56E-03
Manganese	2.12E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.50E+02	4.20E-01	NA	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	2.06E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.06E-02	8.80E+01	2.34E-04	2.84E+02	7.25E-05
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	4.57E-01	mg/kg	1.00E+00		1.14E+00	1.83E+00	NA	5.28E-01	NA	9.15E-02	9.15E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	1.77E-03	NA	0.00E+00	0.00E+00	1.77E-03	1.32E+01	1.34E-04	3.96E+01	4.46E-05
Mercury (methyl)	0.00E+00	mg/L	2.09E-01	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	7.56E-01	NA	7.56E-01			0.00E+00	1.44E-03	0.00E+00	0.00E+00	0.00E+00	NA	5.21E-03	NA	5.21E-03	0.00E+00	0.00E+00	1.19E-02	3.20E-02	3.71E-01	1.60E-01	7.41E-02
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	7.00E-01	0.00E+00
Nickel	0.00E+00	mg/L	0.00E+00	mg/kg	8.33E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	NA	6.39E-02	NA	8.71E-02	8.71E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	3.91E-03	NA	0.00E+00	0.00E+00	3.91E-03	4.00E+01	9.76E-05	8.00E+01	4.88E-05
Nitrate	4.70E-01	mg/L	0.00E+00	mg/kg	9.11E-01	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	4.57E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.40E-03	0.00E+00	0.00E+00	0.00E+00	4.71E-02	5.07E+02	9.28E-05	1.13E+03	4.17E-05
Nitrate/Nitrite	6.18E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02								6.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.00E-03	5.07E+02	1.18E-05	1.13E+03	5.31E-06
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.02E-07	0.00E+00	0.00E+00	0.00E+00	1.02E-07	2.40E-01	4.26E-07	2.40E+00	4.26E-08
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E+00	mg/kg	1.00E+00			3.00E-01	NA	8.18E+00	8.18E+00	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	1.27E-01	0.00E+00	0.00E+00	0.00E+00	1.27E-01	8.50E+00	1.49E-02	2.55E+01	4.98E-03
Selenium	3.23E-03	mg/L	1.10E+00	mg/kg	1.98E+00	mg/kg	1.00E+00	2.05E+02	4.50E+00	7.72E-01	5.12E-01	5.42E-01	5.12E-01	1.51E-01	1.51E-01	3.13E-04	7.60E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.86E-02	7.87E-03	1.86E-02	0.00E+00	0.00E+00	5.30E-02	2.00E-01	2.65E-01	3.30E-01	1.61E-01
Silver	0.00E+00	mg/L	2.05E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	1.41E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.47E-04	0.00E+00	9.47E-04	0.00E+00	0.00E+00	1.60E-02	1.90E+01	8.43E-04	5.70E+01	2.81E-04
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.46E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.79E-02	0.00E+00	0.00E+00	0.00E+00	3.79E-02	2.63E+02	1.44E-04	7.89E+02	4.80E-05
Sulfate	1.10E+01	mg/L	4.59E+00	mg/kg	1.16E+02	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	1.07E+00	3.16E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.18E-02	1.79E-01	3.18E-02	0.00E+00	0.00E+00	1.34E+00	NA	NA	NA	NA
Thallium	1.00E-03	mg/L	6.22E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00							9.73E-05	4.29E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.39E-03	7.40E-03	5.93E-01	7.40E-02	5.93E-02
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.82E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.93E-08	0.00E+00	0.00E+00	0.00E+00	1.93E-08	4.58E+00	4.21E-09	9.16E+00	2.10E-09
Vanadium	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.29E-04	0.00E+00	0.00E+00	0.00E+00	6.29E-04	2.10E-01	3.00E-03	2.10E+00	3.00E-04
Zinc	6.50E-02	mg/L	7.78E+01	mg/kg	7.04E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	4.90E+00	7.15E-01	7.47E-01	7.15E-01	1.84E-01	1.84E-01	6.31E-03	5.37E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.84E+00	3.86E-01	1.84E+00	0.00E+00	0.00E+00	4.60E+00	1.60E+02	2.87E-02	3.20E+02	1.44E-02

	EEQ N	EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	2.7E-07	7.1E-08
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	7.6E-05	1.5E-05
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	4.4E-03	4.4E-04
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	7.6E-05	7.6E-06
Aldrin/Dieldrin/Endrin EEQ:	1.1E-03	1.1E-04

Intake Equation:

$$E_j = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi \times Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0.1
Aquatic plant diet fraction =	0.45
Plant root diet fraction =	0.45
Fish diet fraction =	0
Aq. Invert diet fraction =	0
Terr. Invert diet fraction =	0
Mammal diet fraction =	0
Bird diet fraction =	0
Soil ingestion rate =	0
Sediment ingestion rate =	0.008093
Food ingestion rate =	0.0861
Body weight =	1.174
Home range =	0.33112
Water intake rate =	0.114
Site Area =	246
Area Use Factor (AUF) =	1
Exposure Duration (ED) =	1

Table E-13
Tier 1 COPCs
EEQs and Hazard Indices for the River Otter at LHAAP
Industrial Sub-Area/Goose Prairie Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L
							-----	-----	-----	-----	-----Unitless-----	-----	-----	-----	-----	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d	
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00
2,3,7,8-TCDD TEQ	8.59E-09	mg/L	1.56E-06	mg/kg	9.34E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	2.35E-10	3.25E-10	0.00E+00	2.11E-05	2.74E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.56E-10	2.11E-05	1.00E-06	2.11E+01	1.00E-05	2.11E+00
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00
4,4'-DDD	0.00E+00	mg/L	2.97E-03	mg/kg	1.77E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	6.20E-07	0.00E+00	0.00E+00	1.00E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.63E-06	3.26E-06	8.00E-01	4.07E-06	4.00E+00	8.14E-07
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.82E-02	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.45E-05	1.45E-05	8.00E-01	1.81E-05	4.00E+00	3.62E-06
4,4'-DDT	0.00E+00	mg/L	3.04E-03	mg/kg	6.08E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	6.34E-07	0.00E+00	0.00E+00	4.10E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.10E-06	1.28E-05	8.00E-01	1.60E-05	4.00E+00	3.21E-06
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.50E-03	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.39E-06	1.39E-06	2.00E-01	6.93E-06	1.00E+00	1.39E-06
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.08E-03	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.92E-06	1.92E-06	4.58E+00	4.19E-07	9.16E+00	2.10E-07
Aluminum	2.10E+00	mg/L	1.03E+04	mg/kg	7.38E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	5.73E-02	2.14E+00	0.00E+00	1.30E-01	3.71E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.12E-02	3.95E+01	1.93E+00	2.05E+01	1.93E+01	2.05E+00
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E+00	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.36E-04	3.36E-04	1.25E-01	2.69E-03	1.25E+00	2.69E-04
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	6.94E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.41E-06	6.41E-06	6.85E-02	9.36E-05	6.85E-01	9.36E-06
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.45E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.34E-06	1.34E-06	6.80E-02	1.97E-05	6.90E-01	1.94E-06
Aroclor 1254	0.00E+00	mg/L	5.10E-02	mg/kg	5.66E-02	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	1.06E-05	0.00E+00	0.00E+00	8.95E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.82E-05	9.54E-04	6.80E-02	1.40E-02	6.90E-01	1.38E-03
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.69E-02	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.60E-05	2.60E-05	6.80E-02	3.83E-04	6.90E-01	3.77E-05
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.90E-01	0.00E+00
Barium	0.00E+00	mg/L	1.34E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	2.79E-02	0.00E+00	0.00E+00	4.82E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E-01	5.10E+00	1.00E-01	1.98E+01	2.58E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00
bis(2-ethylhexyl)phthalate	2.43E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	6.64E-04	0.00E+00	0.00E+00	5.43E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.43E-01	1.83E+01	2.96E-02	1.83E+02	2.97E-03
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00
Cadmium	0.00E+00	mg/L	5.24E-01	mg/kg	4.03E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.52E+01	8.28E-01	9.31E-01	9.31E-01	9.22E-01	9.22E-01	0.00E+00	1.09E-04	0.00E+00	0.00E+00	3.36E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.98E-04	3.76E-03	1.00E+00	3.76E-03	1.00E+01	3.76E-04
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.84E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.70E-07	1.70E-07	4.58E+00	3.71E-08	9.16E+00	1.86E-08
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.82E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.85E-03	4.85E-03	3.28E+00	1.48E-03	1.31E+01	3.69E-04
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.40E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.14E-07	3.14E-07	4.58E+00	6.86E-08	9.16E+00	3.43E-08
Copper	1.42E-02	mg/L	1.27E+01	mg/kg	1.87E+01	mg/kg	1.00E+00	5.92E+03	5.25E+00	6.54E-01	4.15E-01	3.28E-01	3.28E-01	1.49E-01	1.49E-01	3.87E-04	2.64E-03	0.00E+00	1.21E+00	5.33E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.24E-03	1.27E+00	1.17E+01	1.08E-01	1.51E+01	8.37E-02
Dieldrin	0.00E+00	mg/L	3.00E-03	mg/kg	3.29E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	6.25E-07	0.00E+00	0.00E+00	1.39E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.04E-07	1.49E-05	2.00E-02	7.43E-04	2.00E-01	7.43E-05
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.80E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.71E-07	3.71E-07	9.20E-02	4.03E-06	9.20E-01	4.03E-07
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	9.74E-03	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.99E-06	8.99E-06	4.58E+00	1.96E-06	9.16E+00	9.82E-07
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.11E-04	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.95E-07	1.95E-07	1.00E-01	1.95E-06	1.00E+00	1.95E-07
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.77E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.64E-07	1.64E-07	8.00E-02	2.04E-06	2.90E-01	5.64E-07
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00
Iron	3.14E+00	mg/L	0.00E+00	mg/kg	1.68E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	8.59E-02	0.00E+00	0.00E+00	4.53E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.79E-02	4.55E+01	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Lead	7.76E-03	mg/L	7.66E+01	mg/kg	7.30E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	3.59E-01	3.92E-02	4.00E-02	4.00E-02	1.33E-02	1.33E-02	2.12E-04	1.60E-02	0.00E+00	1.68E-01	3.73E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.79E-04	2.22E-01	8.00E+00	2.78E-02	8.00E+01	2.78E-03
Manganese	2.73E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+03	2.10E+00	NA	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	7.46E-03	0.00E+00	0.00E+00	7.88E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.88E+00	8.80E+01	8.96E-02	2.84E+02	2.78E-02
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	7.96E-01	mg/kg	1.00E+00		2.87E+00	1.26E+00	NA	4.09E-01	4.09E-01	1.03E-01	1.03E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	6.57E-05	6.57E-05	1.00E+00	6.57E-05	3.00E+00	2.19E-05
Mercury (methyl)	0.00E+00	mg/L	2.65E-01	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	6.78E-01	NA	NA			0.00E+00	5.51E-05	0.00E+00	0.00E+00	6.08E-04	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	6.63E-04	1.50E-02	4.42E-02	2.50E-02	2.65E-02
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	7.00E-01	0.00E+00
Nickel	0.00E+00	mg/L	0.00E+00	mg/kg	8.88E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	NA	6.29E-02	6.29E-02	1.01E-01	1.01E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	7.19E-04	7.19E-04	4.00E+01	1.80E-05	8.00E+01	8.99E-06
Nitrate	8.86E-01	mg/L	0.00E+00	mg/kg	1.12E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	2.42E-02	0.00E+00	0.00E+00	1.36E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.49E-04	1.37E+01	5.07E+02	2.70E-02	1.13E+03	1.21E-02
Nitrate/Nitrite	8.12E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03								2.22E-03	0.00E+00	0.00E+00	1.25E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E+00	5.07E+02	2.47E-03	1.13E+03	1.11E-03
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	7.16E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.62E-07	6.62E-07	2.40E-01	2.76E-06	2.40E+00	2.76E-07
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	3.62E+00	mg/kg	1.00E+00			1.14E+00	NA	6.57E+00	6.57E+00	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	4.82E-04	4.82E-04	8.50E+00	5.67E-05	2.55E+01	1.89E-05
Selenium	3.74E-03	mg/L	1.29E+00	mg/kg	2.63E+00	mg/kg	1.00E+00	2.05E+02	4.50E+00	7.15E-01	5.20E-01	5.58E-01	5.58E-01	1.95E-01	1.95E-01	1.02E-04	2.69E-04	0.00E+00	1.11E-02	4.65E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.11E-04	1.65E-02	2.00E-01	8.25E-02	3.30E-01	5.00E-02
Silver	0.00E+00	mg/L	2.66E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	5.54E-04	0.00E+00	0.00E+00	9.59E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.01E-02	1.90E+01	5.34E-04	5.70E+01	1.78E-04
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.65E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.53E-03	3.53E-03	2.63E+02	1.34E-05	7.89E+02	4.48E-06
Sulfate	1.42E+01	mg/L	6.05E+00	mg/kg	1.75E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	3.89E-01	1.26E-03	0.00E+00	2.19E+02	1.02E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.34E-02	2.20E+02	NA	NA	NA	NA
Thallium	1.70E-03	mg/L	7.02E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00							4.65E-05	1.46E-04	0.00E+00	3.90E-01	2.53E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.93E-01	7.40E-03	5.31E+01	7.40E-02	5.31E+00
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.59E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.31E-07	3.31E-07	4.58E+00	7.24E-08	9.16E+00	3.62E-08
Vanadium	0.00E+00	mg/L	0.00E+00	mg/kg	2.54E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.21E-04	1.21E-04	2.10E-01	5.74E-04	2.10E+00	5.74E-05
Zinc	8.78E-02	mg/L	9.41E+01	mg/kg	7.62E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	4.65E+00	6.57E-01	7.21E-01	7.21E-01	4.51E-01	4.51E-01	2.40E-03	1.96E-02	0.00E+00	6.33E+00	5.67E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.75E-02	6.95E+00	1.60E+02	4.34E-02	3.20E+02	2.17E-02

	EEQ N	EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ:	4.5E-06	1.5E-06
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	3.8E-05	7.6E-06
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.5E-02	1.4E-03
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	3.0E-02	3.0E-03
Aldrin/Dieldrin/Endrin EEQ:	7.5E-04	7.6E-05

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\,x\,Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0
Aquatic plant diet fraction =	0
Plant root diet fraction =	0
Fish diet fraction =	0.9
Aq. Invert diet fraction =	0.05
Terr. Invert diet fraction =	0
Mammal diet fraction =	0
Bird diet fraction =	0.05
Soil ingestion rate =	0
Sediment ingestion rate =	0.00494
Food ingestion rate =	0.38
Body weight =	8
Home range =	729
Water intake rate =	0.648
Site Area =	246
Area Use Factor (AUF) =	0.3374486
Exposure Duration (ED) =	1

Table E-14
Tier 2 COPCs
EEQs and Hazard Indices for the River Otter at LHAAP
Industrial Sub-Area/Goose Praire Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L
							---------------------------------------Unitless---------------------------------------									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d	
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00
2,3,7,8-TCDD TEQ	7.00E-09	mg/L	1.27E-06	mg/kg	7.39E-06	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	1.41E-10	1.95E-10	0.00E+00	1.72E-06	3.51E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.06E-10	1.72E-06	1.00E-06	1.72E+00	1.00E-05	1.72E-01
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00
4,4'-DDD	0.00E+00	mg/L	2.56E-03	mg/kg	1.51E-03	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	3.93E-07	0.00E+00	0.00E+00	6.36E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.80E-07	1.81E-06	8.00E-01	2.26E-06	4.00E+00	4.52E-07
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E-02	mg/kg	1.00E+00		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.96E-06	7.96E-06	8.00E-01	9.95E-06	4.00E+00	1.99E-06
4,4'-DDT	0.00E+00	mg/L	2.61E-03	mg/kg	4.99E-03	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	4.02E-07	0.00E+00	0.00E+00	2.59E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.62E-06	5.61E-06	8.00E-01	7.02E-06	4.00E+00	1.40E-06
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.38E-03	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.16E-07	7.16E-07	2.00E-01	3.58E-06	1.00E+00	7.16E-07
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.28E-03	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.65E-07	6.65E-07	4.58E+00	1.45E-07	9.16E+00	7.26E-08
Aluminum	1.73E+00	mg/L	8.98E+03	mg/kg	7.05E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	3.49E-02	1.38E+00	0.00E+00	7.92E-02	2.39E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.76E-02	2.54E+01	1.93E+00	1.32E+01	1.93E+01	1.32E+00
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E+00	mg/kg	1.00E+00			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.56E-04	1.56E-04	1.25E-01	1.25E-03	1.25E+00	1.25E-04
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	5.90E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.06E-06	3.06E-06	6.85E-02	4.46E-05	6.85E-01	4.46E-06
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.27E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.60E-07	6.60E-07	6.80E-02	9.71E-06	6.90E-01	9.57E-07
Aroclor 1254	0.00E+00	mg/L	4.20E-02	mg/kg	4.34E-02	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	6.46E-06	0.00E+00	0.00E+00	1.16E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E-05	1.35E-04	6.80E-02	1.99E-03	6.90E-01	1.96E-04
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.47E-02	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.46E-05	1.46E-05	6.80E-02	2.14E-04	6.90E-01	2.11E-05
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.90E-01	0.00E+00
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	1.82E-02	0.00E+00	0.00E+00	3.14E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.32E-01	5.10E+00	6.52E-02	1.98E+01	1.68E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00
bis(2-ethylhexyl)phthalate	1.43E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	2.88E-04	0.00E+00	0.00E+00	1.09E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E-01	1.83E+01	5.94E-03	1.83E+02	5.95E-04
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00
Cadmium	0.00E+00	mg/L	4.84E-01	mg/kg	3.79E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	2.60E+01	8.58E-01	9.58E-01	9.58E-01	6.72E-01	6.72E-01	0.00E+00	7.44E-05	0.00E+00	0.00E+00	1.72E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.51E-04	3.97E-04	1.00E+00	3.97E-04	1.00E+01	3.97E-05
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.60E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.27E-08	8.27E-08	4.58E+00	1.80E-08	9.16E+00	9.02E-09
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.67E-04	8.67E-04	3.28E+00	2.64E-04	1.31E+01	6.59E-05
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.76E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.43E-07	1.43E-07	4.58E+00	3.12E-08	9.16E+00	1.56E-08
Copper	1.23E-02	mg/L	1.08E+01	mg/kg	1.76E+01	mg/kg	1.00E+00	1.11E+03	1.56E+00	6.85E-01	4.57E-01	3.40E-01	3.40E-01	8.97E-02	8.97E-02	2.47E-04	1.67E-03	0.00E+00	1.45E-01	9.99E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.32E-04	1.58E-01	1.17E+01	1.35E-02	1.51E+01	1.04E-02
Dieldrin	0.00E+00	mg/L	2.57E-03	mg/kg	2.78E-04	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	3.95E-07	0.00E+00	0.00E+00	8.81E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.44E-07	9.35E-06	2.00E-02	4.68E-04	2.00E-01	4.68E-05
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.31E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.38E-07	2.38E-07	9.20E-02	2.59E-06	9.20E-01	2.59E-07
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-03	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.80E-06	2.80E-06	4.58E+00	6.11E-07	9.16E+00	3.06E-07
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	1.86E-04	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.64E-08	9.64E-08	1.00E-01	9.64E-07	1.00E+00	9.64E-08
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.54E-04	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.98E-08	7.98E-08	8.00E-02	9.98E-07	2.90E-01	2.75E-07
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00
Iron	2.68E+00	mg/L	0.00E+00	mg/kg	1.59E+04	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	5.41E-02	0.00E+00	0.00E+00	7.14E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.65E-02	7.21E+00	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Lead	6.26E-03	mg/L	5.97E+01	mg/kg	6.49E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	3.67E-01	4.37E-02	4.22E-02	4.22E-02	1.16E-02	1.16E-02	1.26E-04	9.18E-03	0.00E+00	2.98E-02	2.51E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.47E-04	4.21E-02	8.00E+00	5.26E-03	8.00E+01	5.26E-04
Manganese	2.12E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.50E+02	4.20E-01	NA	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	4.28E-03	0.00E+00	0.00E+00	5.64E-01	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.69E-01	8.80E+01	6.46E-03	2.84E+02	2.00E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	4.57E-01	mg/kg	1.00E+00		1.14E+00	1.83E+00	NA	5.28E-01	5.28E-01	9.15E-02	9.15E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	2.47E-05	2.47E-05	1.00E+00	2.47E-05	3.00E+00	8.24E-06
Mercury (methyl)	0.00E+00	mg/L	2.09E-01	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	7.56E-01	NA	NA			0.00E+00	3.21E-05	0.00E+00	0.00E+00	1.40E-04	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	1.72E-04	1.50E-02	1.15E-02	2.50E-02	6.89E-03
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	7.00E-01	0.00E+00
Nickel	0.00E+00	mg/L	0.00E+00	mg/kg	8.33E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	NA	6.39E-02	6.39E-02	8.71E-02	8.71E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	4.29E-04	4.29E-04	4.00E+01	1.07E-05	8.00E+01	5.36E-06
Nitrate	4.70E-01	mg/L	0.00E+00	mg/kg	9.11E-01	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	9.48E-03	0.00E+00	0.00E+00	1.51E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.97E-05	1.52E+00	5.07E+02	2.99E-03	1.13E+03	1.34E-03
Nitrate/Nitrite	6.18E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02								1.25E-03	0.00E+00	0.00E+00	1.98E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.99E-01	5.07E+02	3.93E-04	1.13E+03	1.76E-04
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.64E-07	2.64E-07	2.40E-01	1.10E-06	2.40E+00	1.10E-07
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E+00	mg/kg	1.00E+00			3.00E-01	NA	8.18E+00	8.18E+00	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	1.39E-04	1.39E-04	8.50E+00	1.63E-05	2.55E+01	5.43E-06
Selenium	3.23E-03	mg/L	1.10E+00	mg/kg	1.98E+00	mg/kg	1.00E+00	2.05E+02	4.50E+00	7.72E-01	5.12E-01	5.42E-01	5.42E-01	1.51E-01	1.51E-01	6.51E-05	1.69E-04	0.00E+00	7.04E-03	2.93E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.77E-04	1.04E-02	2.00E-01	5.19E-02	3.30E-01	3.15E-02
Silver	0.00E+00	mg/L	2.05E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	3.15E-04	0.00E+00	0.00E+00	5.45E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.77E-03	1.90E+01	3.03E-04	5.70E+01	1.01E-04
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.46E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.61E-03	1.61E-03	2.63E+02	6.13E-06	7.89E+02	2.04E-06
Sulfate	1.10E+01	mg/L	4.59E+00	mg/kg	1.16E+02	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	2.22E-01	7.05E-04	0.00E+00	3.53E+01	1.14E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.63E-03	3.55E+01	NA	NA	NA	NA
Thallium	1.00E-03	mg/L	6.22E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00							2.02E-05	9.56E-05	0.00E+00	8.00E-04	1.66E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.57E-03	7.40E-03	3.47E-01	7.40E-02	3.47E-02
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.82E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.46E-07	1.46E-07	4.58E+00	3.19E-08	9.16E+00	1.59E-08
Vanadium	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.73E-05	7.73E-05	2.10E-01	3.68E-04	2.10E+00	3.68E-05
Zinc	6.50E-02	mg/L	7.78E+01	mg/kg	7.04E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	4.90E+00	7.15E-01	7.47E-01	7.47E-01	1.84E-01	1.84E-01	1.31E-03	1.20E-02	0.00E+00	2.01E+00	8.91E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.67E-03	2.12E+00	1.60E+02	1.33E-02	3.20E+02	6.64E-03

	EEQ N	EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.8E-06	5.2E-07
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	1.9E-05	3.8E-06
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	2.3E-03	2.2E-04
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	5.9E-03	6.0E-04
Aldrin/Dieldrin/Endrin EEQ:	4.7E-04	4.8E-05

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\, x Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0
Aquatic plant diet fraction =	0
Plant root diet fraction =	0
Fish diet fraction =	0.9
Aq. Invert diet fraction =	0.05
Terr. Invert diet fraction =	0
Mammal diet fraction =	0
Bird diet fraction =	0.05
Soil ingestion rate =	0
Sediment ingestion rate =	0.00494
Food ingestion rate =	0.38
Body weight =	8
Home range =	988
Water intake rate =	0.648
Site Area =	246
Area Use Factor (AUF) =	0.248988
Exposure Duration (ED) =	1

Table E-15
Tier 1 COPCs
EEQs and Hazard Indices for the Townsend's Big-Eared Bat at LHAAP
Industrial Sub-Area/Goose Prairie Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L
							--------Unitless--------									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d	
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00
2,3,7,8-TCDD TEQ	8.59E-09	mg/L	1.56E-06	mg/kg	9.34E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	1.36E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.18E-09	0.00E+00	0.00E+00	0.00E+00	4.53E-09	1.00E-06	4.53E-03	1.00E-05	4.53E-04
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00
4,4'-DDD	0.00E+00	mg/L	2.97E-03	mg/kg	1.77E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.06E-05	0.00E+00	0.00E+00	0.00E+00	1.06E-05	8.00E-01	1.32E-05	4.00E+00	2.65E-06
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.82E-02	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.45E-04	0.00E+00	0.00E+00	0.00E+00	8.45E-04	8.00E-01	1.06E-03	4.00E+00	2.11E-04
4,4'-DDT	0.00E+00	mg/L	3.04E-03	mg/kg	6.08E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.64E-05	0.00E+00	0.00E+00	0.00E+00	3.64E-05	8.00E-01	4.55E-05	4.00E+00	9.10E-06
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.50E-03	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.62E-07	0.00E+00	0.00E+00	0.00E+00	7.62E-07	2.00E-01	3.81E-06	1.00E+00	7.62E-07
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.08E-03	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.28E-06	0.00E+00	0.00E+00	0.00E+00	6.28E-06	4.58E+00	1.37E-06	9.16E+00	6.85E-07
Aluminum	2.10E+00	mg/L	1.03E+04	mg/kg	7.38E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	3.31E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E+00	0.00E+00	0.00E+00	0.00E+00	1.60E+00	1.93E+00	8.30E-01	1.93E+01	8.30E-02
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E+00	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.32E-02	0.00E+00	0.00E+00	0.00E+00	1.32E-02	1.25E-01	1.06E-01	1.25E+00	1.06E-02
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	6.94E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.48E-05	0.00E+00	0.00E+00	0.00E+00	8.48E-05	6.85E-02	1.24E-03	6.85E-01	1.24E-04
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.45E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E-06	0.00E+00	0.00E+00	0.00E+00	1.10E-06	6.80E-02	1.62E-05	6.80E-01	1.62E-06
Aroclor 1254	0.00E+00	mg/L	5.10E-02	mg/kg	5.66E-02	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.75E-05	0.00E+00	0.00E+00	0.00E+00	3.75E-05	6.80E-02	5.51E-04	6.80E-01	5.51E-05
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.69E-02	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.76E-06	0.00E+00	0.00E+00	0.00E+00	5.76E-06	6.80E-02	8.47E-05	6.80E-01	8.47E-06
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.80E-01	0.00E+00
Barium	0.00E+00	mg/L	1.34E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E+00	0.00E+00	1.98E+01	0.00E+00
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00
bis(2-ethylhexyl)phthalate	2.43E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	3.83E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.83E-03	1.83E+01	2.09E-04	1.83E+02	2.09E-05
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00
Cadmium	0.00E+00	mg/L	5.24E-01	mg/kg	4.03E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.52E+01	8.28E-01	9.31E-01	9.31E-01	9.22E-01	9.22E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.81E-02	0.00E+00	0.00E+00	0.00E+00	2.81E-02	1.00E+00	2.81E-02	1.00E+01	2.81E-03
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.84E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.55E-07	0.00E+00	0.00E+00	0.00E+00	5.55E-07	4.58E+00	1.21E-07	9.16E+00	6.06E-08
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.82E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.53E-01	0.00E+00	0.00E+00	0.00E+00	6.53E-01	3.28E+00	1.99E-01	1.31E+01	4.97E-02
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.40E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.03E-06	0.00E+00	0.00E+00	0.00E+00	1.03E-06	4.58E+00	2.24E-07	9.16E+00	1.12E-07
Copper	1.42E-02	mg/L	1.27E+01	mg/kg	1.87E+01	mg/kg	1.00E+00	5.92E+03	5.25E+00	6.54E-01	4.15E-01	3.28E-01	3.28E-01	1.49E-01	1.49E-01	2.24E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E-01	0.00E+00	0.00E+00	0.00E+00	4.60E-01	1.17E+01	3.93E-02	1.51E+01	3.04E-02
Dieldrin	0.00E+00	mg/L	3.00E-03	mg/kg	3.29E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.04E-05	0.00E+00	0.00E+00	0.00E+00	4.04E-05	2.00E-02	2.02E-03	2.00E-01	2.02E-04
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.80E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E-06	0.00E+00	0.00E+00	0.00E+00	1.09E-06	9.20E-02	1.18E-05	9.20E-01	1.18E-06
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	9.74E-03	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.94E-05	0.00E+00	0.00E+00	0.00E+00	2.94E-05	4.58E+00	6.41E-06	9.16E+00	3.21E-06
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.11E-04	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.51E-07	0.00E+00	0.00E+00	0.00E+00	2.51E-07	1.00E-01	2.51E-06	1.00E+00	2.51E-07
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.77E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-07	0.00E+00	0.00E+00	0.00E+00	2.50E-07	8.00E-02	3.13E-06	2.90E-01	8.63E-07
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00
Iron	3.14E+00	mg/L	0.00E+00	mg/kg	1.68E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	4.96E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.04E+00	0.00E+00	0.00E+00	0.00E+00	5.53E+00	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Lead	7.76E-03	mg/L	7.66E+01	mg/kg	7.30E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	3.59E-01	3.92E-02	4.00E-02	4.00E-02	1.33E-02	1.33E-02	1.23E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.19E-01	0.00E+00	0.00E+00	0.00E+00	2.20E-01	8.00E+00	2.75E-02	8.00E+01	2.75E-03
Manganese	2.73E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+03	2.10E+00	NA	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	4.31E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.31E-02	8.80E+01	4.90E-04	2.84E+02	1.52E-04
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	7.96E-01	mg/kg	1.00E+00		2.87E+00	1.26E+00	NA	4.09E-01	4.09E-01	1.03E-01	1.03E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	2.43E-02	0.00E+00	0.00E+00	0.00E+00	2.43E-02	1.32E+01	1.84E-03	3.96E+01	6.15E-04
Mercury (methyl)	0.00E+00	mg/L	2.65E-01	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	6.78E-01	NA	NA			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	3.20E-02	0.00E+00	1.60E-01	0.00E+00
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	7.00E-01	0.00E+00
Nickel	0.00E+00	mg/L	0.00E+00	mg/kg	8.88E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	NA	6.29E-02	6.29E-02	1.01E-01	1.01E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	4.18E-02	0.00E+00	0.00E+00	0.00E+00	4.18E-02	4.00E+01	1.05E-03	8.00E+01	5.23E-04
Nitrate	8.86E-01	mg/L	0.00E+00	mg/kg	1.12E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	1.40E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.93E-02	0.00E+00	0.00E+00	0.00E+00	1.69E-01	5.07E+02	3.34E-04	1.13E+03	1.50E-04
Nitrate/Nitrite	8.12E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03								1.28E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E-02	5.07E+02	2.53E-05	1.13E+03	1.13E-05
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	7.16E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.79E-06	0.00E+00	0.00E+00	0.00E+00	1.79E-06	2.40E-01	7.48E-06	2.40E+00	7.48E-07
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	3.62E+00	mg/kg	1.00E+00			1.14E+00	NA	6.57E+00	6.57E+00	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	1.78E+00	0.00E+00	0.00E+00	0.00E+00	1.78E+00	8.50E+00	2.09E-01	2.55E+01	6.97E-02
Selenium	3.74E-03	mg/L	1.29E+00	mg/kg	2.63E+00	mg/kg	1.00E+00	2.05E+02	4.50E+00	7.15E-01	5.20E-01	5.58E-01	5.58E-01	1.95E-01	1.95E-01	5.90E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E-01	0.00E+00	0.00E+00	0.00E+00	1.10E-01	2.00E-01	5.52E-01	3.30E-01	3.34E-01
Silver	0.00E+00	mg/L	2.66E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.65E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.94E-01	0.00E+00	0.00E+00	0.00E+00	6.94E-01	2.63E+02	2.64E-03	7.89E+02	8.80E-04
Sulfate	1.42E+01	mg/L	6.05E+00	mg/kg	1.75E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	2.25E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.59E+00	0.00E+00	0.00E+00	0.00E+00	6.84E+00	NA	NA	NA	NA
Thallium	1.70E-03	mg/L	7.02E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00							2.68E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E-04	7.40E-03	3.63E-02	7.40E-02	3.63E-03
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.59E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.08E-06	0.00E+00	0.00E+00	0.00E+00	1.08E-06	4.58E+00	2.36E-07	9.16E+00	1.18E-07
Vanadium	0.00E+00	mg/L	0.00E+00	mg/kg	2.54E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.60E-03	0.00E+00	0.00E+00	0.00E+00	7.60E-03	2.10E-01	3.62E-02	2.10E+00	3.62E-03
Zinc	8.78E-02	mg/L	9.41E+01	mg/kg	7.62E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	4.65E+00	6.57E-01	7.21E-01	7.21E-01	4.51E-01	4.51E-01	1.39E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.11E+00	0.00E+00	0.00E+00	0.00E+00	4.13E+00	1.60E+02	2.58E-02	3.20E+02	1.29E-02

	EEQ N	EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ:	1.1E-05	4.4E-06
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	1.1E-03	2.2E-04
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.9E-03	1.9E-04
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	2.1E-04	2.1E-05
Aldrin/Dieldrin/Endrin EEQ:	2.0E-03	2.0E-04

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi x Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	1
Aquatic plant diet fraction =	0
Plant root diet fraction =	0
Fish diet fraction =	0
Aq. Invert diet fraction =	0
Terr. Invert diet fraction =	0
Mammal diet fraction =	0
Bird diet fraction =	0
Soil ingestion rate =	0
Sediment ingestion rate =	0
Food ingestion rate =	0.000711
Body weight =	0.0095
Home range =	1310
Water intake rate =	0.0015
Site Area =	2330
Area Use Factor (AUF) =	1
Exposure Duration (ED) =	1

Table E-16
Tier 2 COPCs
EEQs and Hazard Indices for the Townsend's Big-Eared Bat LHAAP
Industrial Sub-Area/Goose Praire Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L
							-------	-------	-------	-------	Unitless	-------	-------	-------		mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d	
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00
2,3,7,8-TCDD TEQ	7.00E-09	mg/L	1.27E-06	mg/kg	7.39E-06	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	6.55E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E-09	0.00E+00	0.00E+00	0.00E+00	1.93E-09	1.00E-06	1.93E-03	1.00E-05	1.93E-04
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00
4,4'-DDD	0.00E+00	mg/L	2.56E-03	mg/kg	1.51E-03	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.87E-06	0.00E+00	0.00E+00	0.00E+00	1.87E-06	8.00E-01	2.34E-06	4.00E+00	4.68E-07
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E-02	mg/kg	1.00E+00		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.62E-05	0.00E+00	0.00E+00	0.00E+00	8.62E-05	8.00E-01	1.08E-04	4.00E+00	2.16E-05
4,4'-DDT	0.00E+00	mg/L	2.61E-03	mg/kg	4.99E-03	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.20E-06	0.00E+00	0.00E+00	0.00E+00	6.20E-06	8.00E-01	7.75E-06	4.00E+00	1.55E-06
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.38E-03	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.98E-07	0.00E+00	0.00E+00	0.00E+00	2.98E-07	2.00E-01	1.49E-06	1.00E+00	2.98E-07
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.28E-03	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.31E-07	0.00E+00	0.00E+00	0.00E+00	5.31E-07	4.58E+00	1.16E-07	9.16E+00	5.80E-08
Aluminum	1.73E+00	mg/L	8.98E+03	mg/kg	7.05E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	1.62E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.69E-01	0.00E+00	0.00E+00	0.00E+00	6.31E-01	1.93E+00	3.27E-01	1.93E+01	3.27E-02
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E+00	mg/kg	1.00E+00			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.91E-03	0.00E+00	0.00E+00	0.00E+00	3.91E-03	1.25E-01	3.13E-02	1.25E+00	3.13E-03
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	5.90E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.19E-06	0.00E+00	0.00E+00	0.00E+00	2.19E-06	6.85E-02	3.20E-05	6.85E-01	3.20E-06
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.27E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.74E-07	0.00E+00	0.00E+00	0.00E+00	4.74E-07	6.80E-02	6.97E-06	6.80E-01	6.97E-07
Aroclor 1254	0.00E+00	mg/L	4.20E-02	mg/kg	4.34E-02	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.88E-06	0.00E+00	0.00E+00	0.00E+00	6.88E-06	6.80E-02	1.01E-04	6.80E-01	1.01E-05
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.47E-02	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.20E-07	0.00E+00	0.00E+00	0.00E+00	4.20E-07	6.80E-02	6.18E-06	6.80E-01	6.18E-07
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.80E-01	0.00E+00
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E+00	0.00E+00	1.98E+01	0.00E+00
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00
bis(2-ethylhexyl)phthalate	1.43E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	1.34E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.34E-03	1.83E+01	7.29E-05	1.83E+02	7.30E-06
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00
Cadmium	0.00E+00	mg/L	4.84E-01	mg/kg	3.79E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	2.60E+01	8.58E-01	9.58E-01	9.58E-01	6.72E-01	6.72E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.61E-02	0.00E+00	0.00E+00	0.00E+00	1.61E-02	1.00E+00	1.61E-02	1.00E+01	1.61E-03
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.60E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.60E-08	0.00E+00	0.00E+00	0.00E+00	6.60E-08	4.58E+00	1.44E-08	9.16E+00	7.21E-09
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.15E-02	0.00E+00	0.00E+00	0.00E+00	3.15E-02	3.28E+00	9.61E-03	1.31E+01	2.40E-03
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.76E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.14E-07	0.00E+00	0.00E+00	0.00E+00	1.14E-07	4.58E+00	2.49E-08	9.16E+00	1.25E-08
Copper	1.23E-02	mg/L	1.08E+01	mg/kg	1.76E+01	mg/kg	1.00E+00	1.11E+03	1.56E+00	6.85E-01	4.57E-01	3.40E-01	3.40E-01	8.97E-02	8.97E-02	1.15E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.65E-01	0.00E+00	0.00E+00	0.00E+00	2.66E-01	1.17E+01	2.28E-02	1.51E+01	1.76E-02
Dieldrin	0.00E+00	mg/L	2.57E-03	mg/kg	2.78E-04	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.96E-07	0.00E+00	0.00E+00	0.00E+00	2.96E-07	2.00E-02	1.48E-05	2.00E-01	1.48E-06
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.31E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.03E-07	0.00E+00	0.00E+00	0.00E+00	4.03E-07	9.20E-02	4.38E-06	9.20E-01	4.38E-07
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-03	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.23E-06	0.00E+00	0.00E+00	0.00E+00	2.23E-06	4.58E+00	4.88E-07	9.16E+00	2.44E-07
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	1.86E-04	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.53E-08	0.00E+00	0.00E+00	0.00E+00	9.53E-08	1.00E-01	9.53E-07	1.00E+00	9.53E-08
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.54E-04	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E-07	0.00E+00	0.00E+00	0.00E+00	1.09E-07	8.00E-02	1.36E-06	2.90E-01	3.74E-07
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00
Iron	2.68E+00	mg/L	0.00E+00	mg/kg	1.59E+04	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	2.51E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.82E+00	0.00E+00	0.00E+00	0.00E+00	3.07E+00	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Lead	6.26E-03	mg/L	5.97E+01	mg/kg	6.49E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	3.67E-01	4.37E-02	4.22E-02	4.22E-02	1.16E-02	1.16E-02	5.86E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.21E-01	0.00E+00	0.00E+00	0.00E+00	1.22E-01	8.00E+00	1.53E-02	8.00E+01	1.53E-03
Manganese	2.12E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.50E+02	4.20E-01	NA	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	1.98E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.98E-02	8.80E+01	2.26E-04	2.84E+02	6.99E-05
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	4.57E-01	mg/kg	1.00E+00		1.14E+00	1.83E+00	NA	5.28E-01	5.28E-01	9.15E-02	9.15E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	1.07E-02	0.00E+00	0.00E+00	0.00E+00	1.07E-02	1.32E+01	8.10E-04	3.96E+01	2.70E-04
Mercury (methyl)	0.00E+00	mg/L	2.09E-01	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	7.56E-01	NA	NA			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	3.20E-02	0.00E+00	1.60E-01	0.00E+00
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	7.00E-01	0.00E+00
Nickel	0.00E+00	mg/L	0.00E+00	mg/kg	8.33E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	NA	6.39E-02	6.39E-02	8.71E-02	8.71E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	2.36E-02	0.00E+00	0.00E+00	0.00E+00	2.36E-02	4.00E+01	5.91E-04	8.00E+01	2.95E-04
Nitrate	4.70E-01	mg/L	0.00E+00	mg/kg	9.11E-01	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	4.40E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.49E-03	0.00E+00	0.00E+00	0.00E+00	5.25E-02	5.07E+02	1.04E-04	1.13E+03	4.65E-05
Nitrate/Nitrite	6.18E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02								5.79E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.79E-03	5.07E+02	1.14E-05	1.13E+03	5.12E-06
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.19E-07	0.00E+00	0.00E+00	0.00E+00	6.19E-07	2.40E-01	2.58E-06	2.40E+00	2.58E-07
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E+00	mg/kg	1.00E+00			3.00E-01	NA	8.18E+00	8.18E+00	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	7.68E-01	0.00E+00	0.00E+00	0.00E+00	7.68E-01	8.50E+00	9.04E-02	2.55E+01	3.01E-02
Selenium	3.23E-03	mg/L	1.10E+00	mg/kg	1.98E+00	mg/kg	1.00E+00	2.05E+02	4.50E+00	7.72E-01	5.12E-01	5.42E-01	5.42E-01	1.51E-01	1.51E-01	3.02E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.76E-02	0.00E+00	0.00E+00	0.00E+00	4.79E-02	2.00E-01	2.40E-01	3.30E-01	1.45E-01
Silver	0.00E+00	mg/L	2.05E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.46E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.29E-01	0.00E+00	0.00E+00	0.00E+00	2.29E-01	2.63E+02	8.72E-04	7.89E+02	2.91E-04
Sulfate	1.10E+01	mg/L	4.59E+00	mg/kg	1.16E+02	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	1.03E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E+00	0.00E+00	0.00E+00	0.00E+00	2.12E+00	NA	NA	NA	NA
Thallium	1.00E-03	mg/L	6.22E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00							9.38E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.38E-05	7.40E-03	1.27E-02	7.40E-02	1.27E-03
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.82E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E-07	0.00E+00	0.00E+00	0.00E+00	1.17E-07	4.58E+00	2.55E-08	9.16E+00	1.27E-08
Vanadium	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.81E-03	0.00E+00	0.00E+00	0.00E+00	3.81E-03	2.10E-01	1.81E-02	2.10E+00	1.81E-03
Zinc	6.50E-02	mg/L	7.78E+01	mg/kg	7.04E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	4.90E+00	7.15E-01	7.47E-01	7.47E-01	1.84E-01	1.84E-01	6.09E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.33E+00	0.00E+00	0.00E+00	0.00E+00	2.34E+00	1.60E+02	1.46E-02	3.20E+02	7.31E-03

	EEQ N	EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.6E-06	4.3E-07
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	1.2E-04	2.4E-05
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.5E-04	1.5E-05
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	7.3E-05	7.3E-06
Aldrin/Dieldrin/Endrin EEQ:	2.1E-05	2.2E-06

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	1
Aquatic plant diet fraction =	0
Plant root diet fraction =	0
Fish diet fraction =	0
Aq. Invert diet fraction =	0
Terr. Invert diet fraction =	0
Mammal diet fraction =	0
Bird diet fraction =	0
Soil ingestion rate =	0
Sediment ingestion rate =	0
Food ingestion rate =	0.000711
Body weight =	0.0095
Home range =	3930
Water intake rate =	0.0015
Site Area =	2330
Area Use Factor (AUF) =	0.5928753
Exposure Duration (ED) =	1

Table E-17
Tier 1 COPCs
EEQs and Hazard Indices for the Snapping Turtle at LHAAP
Industrial Sub-Area/Goose Praire Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
							-----Unitless-----								
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00
2,3,7,8-TCDD TEQ	8.59E-09	mg/L	1.56E-06	mg/kg	9.34E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00
4,4'-DDD	0.00E+00	mg/L	2.97E-03	mg/kg	1.77E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.82E-02	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01
4,4'-DDT	0.00E+00	mg/L	3.04E-03	mg/kg	6.08E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.50E-03	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.08E-03	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Aluminum	2.10E+00	mg/L	1.03E+04	mg/kg	7.38E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E+00	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	6.94E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.45E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00
Aroclor 1254	0.00E+00	mg/L	5.10E-02	mg/kg	5.66E-02	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.69E-02	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00
Barium	0.00E+00	mg/L	1.34E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00
bis(2-ethylhexyl)phthalate	2.43E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00
Cadmium	0.00E+00	mg/L	5.24E-01	mg/kg	4.03E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.52E+01	8.28E-01	9.31E-01	8.28E-01	9.22E-01	9.22E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.84E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.82E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.40E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Copper	1.42E-02	mg/L	1.27E+01	mg/kg	1.87E+01	mg/kg	1.00E+00	5.92E+03	5.25E+00	6.54E-01	4.15E-01	3.28E-01	4.15E-01	1.49E-01	1.49E-01
Dieldrin	0.00E+00	mg/L	3.00E-03	mg/kg	3.29E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.80E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	9.74E-03	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.11E-04	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.77E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00
Iron	3.14E+00	mg/L	0.00E+00	mg/kg	1.68E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01		
Lead	7.76E-03	mg/L	7.66E+01	mg/kg	7.30E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	3.59E-01	3.92E-02	4.00E-02	3.92E-02	1.33E-02	1.33E-02
Manganese	2.73E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+03	2.10E+00	NA	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	7.96E-01	mg/kg	1.00E+00		2.87E+00	1.26E+00	NA	4.09E-01	NA	1.03E-01	1.03E-01
Mercury (methyl)	0.00E+00	mg/L	2.65E-01	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	6.78E-01	NA	6.78E-01		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00
Nickel	0.00E+00	mg/L	0.00E+00	mg/kg	8.88E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	NA	6.29E-02	NA	1.01E-01	1.01E-01
Nitrate	8.86E-01	mg/L	0.00E+00	mg/kg	1.12E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Nitrate/Nitrite	8.12E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	7.16E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	3.62E+00	mg/kg	1.00E+00			1.14E+00	NA	6.57E+00	6.57E+00	1.66E-01	1.66E-01
Selenium	3.74E-03	mg/L	1.29E+00	mg/kg	2.63E+00	mg/kg	1.00E+00	2.05E+02	4.50E+00	7.15E-01	5.20E-01	5.58E-01	5.20E-01	1.95E-01	1.95E-01
Silver	0.00E+00	mg/L	2.66E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.65E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Sulfate	1.42E+01	mg/L	6.05E+00	mg/kg	1.75E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Thallium	1.70E-03	mg/L	7.02E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.59E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Vanadium	0.00E+00	mg/L	0.00E+00	mg/kg	2.54E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03
Zinc	8.78E-02	mg/L	9.41E+01	mg/kg	7.62E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	4.65E+00	6.57E-01	7.21E-01	6.57E-01	4.51E-01	4.51E-01

Chemical	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L
	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d	
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
2,3,7,8-TCDD TEQ	1.72E-10	2.48E-10	0.00E+00	2.55E-06	5.43E-09	0.00E+00	7.89E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.56E-06	NA	NA	NA	NA
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
2,4-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
4,4'-DDD	0.00E+00	4.72E-07	0.00E+00	0.00E+00	1.99E-07	0.00E+00	2.65E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.35E-07	NA	NA	NA	NA
4,4'-DDE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
4,4'-DDT	0.00E+00	4.83E-07	0.00E+00	0.00E+00	8.12E-07	0.00E+00	2.71E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.57E-06	NA	NA	NA	NA
Aldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Aluminum	4.19E-02	1.63E+00	0.00E+00	1.58E-02	7.36E+00	0.00E+00	2.63E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.08E+00	NA	NA	NA	NA
Antimony	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Aroclor 1242	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Aroclor 1248	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Aroclor 1254	0.00E+00	8.10E-06	0.00E+00	0.00E+00	1.77E-04	0.00E+00	5.02E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.86E-04	NA	NA	NA	NA
Aroclor 1260	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Aroclor 1268	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Barium	0.00E+00	2.12E-02	0.00E+00	0.00E+00	9.57E-02	0.00E+00	1.37E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.54E-01	NA	NA	NA	NA
Benzoic Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	4.85E-04	0.00E+00	0.00E+00	6.58E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.63E-02	NA	NA	NA	NA
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Cadmium	0.00E+00	8.32E-05	0.00E+00	0.00E+00	6.66E-04	0.00E+00	4.83E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.23E-03	NA	NA	NA	NA
Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Chromium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
cis-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Copper	2.83E-04	2.01E-03	0.00E+00	1.47E-01	1.06E-02	0.00E+00	5.85E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.65E-01	NA	NA	NA	NA
Dieldrin	0.00E+00	4.76E-07	0.00E+00	0.00E+00	2.76E-06	0.00E+00	5.47E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.71E-06	NA	NA	NA	NA
Endrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Hexachlorobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
HMX	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Iron	6.29E-02	0.00E+00	0.00E+00	5.49E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.56E+00	NA	NA	NA	NA
Isobutanol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Lead	1.55E-04	1.22E-02	0.00E+00	2.04E-02	7.39E-03	0.00E+00	3.34E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.34E-02	NA	NA	NA	NA
Manganese	5.46E-03	0.00E+00	0.00E+00	9.54E-01	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.60E-01	NA	NA	NA	NA
Mercury (inorganic)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Mercury (methyl)	0.00E+00	4.20E-05	0.00E+00	0.00E+00	1.21E-04	NA	2.00E-04	NA	0.00E+00	0.00E+00	0.00E+00	3.62E-04	NA	NA	NA	NA
Mirex	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Nickel	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Nitrate	1.77E-02	0.00E+00	0.00E+00	1.65E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.67E+00	NA	NA	NA	NA
Nitrate/Nitrite	1.62E-03	0.00E+00	0.00E+00	1.52E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.53E-01	NA	NA	NA	NA
Oxychlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
p-Isopropyltoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Pentachloroanisole	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Pentachlorophenol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Perchlorate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Selenium	7.48E-05	2.05E-04	0.00E+00	1.34E-03	9.23E-04	0.00E+00	7.46E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.29E-03	NA	NA	NA	NA
Silver	0.00E+00	4.22E-04	0.00E+00	0.00E+00	1.90E-03	0.00E+00	5.03E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.83E-03	NA	NA	NA	NA
Strontium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Sulfate	2.85E-01	9.61E-04	0.00E+00	2.66E+01	2.02E-03	0.00E+00	2.36E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.69E+01	NA	NA	NA	NA
Thallium	3.40E-05	1.11E-04	0.00E+00	4.73E-02	5.02E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.79E-02	NA	NA	NA	NA
trans-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Vanadium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Zinc	1.76E-03	1.49E-02	0.00E+00	7.67E-01	1.13E-01	0.00E+00	6.88E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.65E-01	NA	NA	NA	NA

	EEQ N	EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	0.0E+00	0.0E+00
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	0.0E+00	0.0E+00
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	0.0E+00	0.0E+00
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00
Aldrin/Dieldrin/Endrin EEQ:	0.0E+00	0.0E+00

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0
Aquatic plant diet fraction =	0.35
Plant root diet fraction =	0
Fish diet fraction =	0.55
Aq. Invert diet fraction =	0.05
Terr. Invert diet fraction =	0
Mammal diet fraction =	0
Bird diet fraction =	0
Soil ingestion rate =	0
Sediment ingestion rate =	0.000889
Food ingestion rate =	0.0178
Body weight =	5.6
Home range =	0.593051
Water intake rate =	0.112
Site Area =	246
Area Use Factor (AUF) =	1
Exposure Duration (ED) =	1

Table E-18
Tier 2 COPCs
EEQs and Hazard Indices for the Snapping Turtle at LHAAP
Industrial Sub-Area/Goose Prairie Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L
							-----Unitless-----									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d	
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
2,3,7,8-TCDD TEQ	7.00E-09	mg/L	1.27E-06	mg/kg	7.39E-06	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	1.40E-10	2.02E-10	0.00E+00	2.82E-07	9.43E-10	0.00E+00	5.47E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.84E-07	NA	NA	NA	NA
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
4,4'-DDD	0.00E+00	mg/L	2.56E-03	mg/kg	1.51E-03	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	4.06E-07	0.00E+00	0.00E+00	1.71E-07	0.00E+00	7.97E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.57E-07	NA	NA	NA	NA
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E-02	mg/kg	1.00E+00		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
4,4'-DDT	0.00E+00	mg/L	2.61E-03	mg/kg	4.99E-03	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	4.15E-07	0.00E+00	0.00E+00	6.97E-07	0.00E+00	8.14E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.19E-06	NA	NA	NA	NA
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.38E-03	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.28E-03	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Aluminum	1.73E+00	mg/L	8.98E+03	mg/kg	7.05E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	3.46E-02	1.43E+00	0.00E+00	1.30E-02	6.42E+00	0.00E+00	1.50E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.91E+00	NA	NA	NA	NA
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E+00	mg/kg	1.00E+00			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	5.90E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.27E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Aroclor 1254	0.00E+00	mg/L	4.20E-02	mg/kg	4.34E-02	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	6.67E-06	0.00E+00	0.00E+00	3.12E-05	0.00E+00	1.67E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.80E-05	NA	NA	NA	NA
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.47E-02	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	1.87E-02	0.00E+00	0.00E+00	8.44E-02	0.00E+00	2.05E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.24E-01	NA	NA	NA	NA
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	1.43E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	2.86E-04	0.00E+00	0.00E+00	1.78E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.81E-02	NA	NA	NA	NA
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Cadmium	0.00E+00	mg/L	4.84E-01	mg/kg	3.79E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	2.60E+01	8.58E-01	9.58E-01	8.58E-01	6.72E-01	6.72E-01	0.00E+00	7.68E-05	0.00E+00	0.00E+00	4.61E-05	0.00E+00	4.62E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.85E-04	NA	NA	NA	NA
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.60E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.76E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Copper	1.23E-02	mg/L	1.08E+01	mg/kg	1.76E+01	mg/kg	1.00E+00	1.11E+03	1.56E+00	6.85E-01	4.57E-01	3.40E-01	4.57E-01	8.97E-02	8.97E-02	2.45E-04	1.72E-03	0.00E+00	2.38E-02	2.69E-03	0.00E+00	5.51E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.40E-02	NA	NA	NA	NA
Dieldrin	0.00E+00	mg/L	2.57E-03	mg/kg	2.78E-04	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	4.08E-07	0.00E+00	0.00E+00	2.37E-06	0.00E+00	6.86E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.85E-06	NA	NA	NA	NA
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.31E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-03	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	1.86E-04	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.54E-04	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Iron	2.68E+00	mg/L	0.00E+00	mg/kg	1.59E+04	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	5.37E-02	0.00E+00	0.00E+00	1.17E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.23E+00	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Lead	6.26E-03	mg/L	5.97E+01	mg/kg	6.49E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	3.67E-01	4.37E-02	4.22E-02	4.37E-02	1.16E-02	1.16E-02	1.25E-04	9.48E-03	0.00E+00	4.90E-03	6.74E-04	0.00E+00	2.91E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.81E-02	NA	NA	NA	NA
Manganese	2.12E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.50E+02	4.20E-01	NA	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	4.24E-03	0.00E+00	0.00E+00	9.27E-02	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.69E-02	NA	NA	NA	NA
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	4.57E-01	mg/kg	1.00E+00		1.14E+00	1.83E+00	NA	5.28E-01	NA	9.15E-02	9.15E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Mercury (methyl)	0.00E+00	mg/L	2.09E-01	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	7.56E-01	NA	7.56E-01			0.00E+00	3.31E-05	0.00E+00	0.00E+00	3.77E-05	NA	1.76E-04	NA	0.00E+00	0.00E+00	0.00E+00	2.46E-04	NA	NA	NA	NA
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Nickel	0.00E+00	mg/L	0.00E+00	mg/kg	8.33E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	NA	6.39E-02	NA	8.71E-02	8.71E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Nitrate	4.70E-01	mg/L	0.00E+00	mg/kg	9.11E-01	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	9.41E-03	0.00E+00	0.00E+00	2.47E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.57E-01	NA	NA	NA	NA
Nitrate/Nitrite	6.18E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02								1.24E-03	0.00E+00	0.00E+00	3.25E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.38E-02	NA	NA	NA	NA
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E+00	mg/kg	1.00E+00			3.00E-01	NA	8.18E+00	8.18E+00	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Selenium	3.23E-03	mg/L	1.10E+00	mg/kg	1.98E+00	mg/kg	1.00E+00	2.05E+02	4.50E+00	7.72E-01	5.12E-01	5.42E-01	5.12E-01	1.51E-01	1.51E-01	6.45E-05	1.75E-04	0.00E+00	1.16E-03	7.88E-04	0.00E+00	6.27E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.81E-03	NA	NA	NA	NA
Silver	0.00E+00	mg/L	2.05E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	3.25E-04	0.00E+00	0.00E+00	1.47E-03	0.00E+00	3.19E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.82E-03	NA	NA	NA	NA
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.46E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Sulfate	1.10E+01	mg/L	4.59E+00	mg/kg	1.16E+02	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	2.20E-01	7.28E-04	0.00E+00	5.79E+00	3.06E-04	0.00E+00	1.07E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.02E+00	NA	NA	NA	NA
Thallium	1.00E-03	mg/L	6.22E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00							2.00E-05	9.88E-05	0.00E+00	1.31E-04	4.45E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.95E-04	NA	NA	NA	NA
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.82E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Vanadium	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Zinc	6.50E-02	mg/L	7.78E+01	mg/kg	7.04E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	4.90E+00	7.15E-01	7.47E-01	7.15E-01	1.84E-01	1.84E-01	1.30E-03	1.24E-02	0.00E+00	3.31E-01	2.39E-02	0.00E+00	6.19E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.30E-01	NA	NA	NA	NA

	EEQ N	EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	0.0E+00	0.0E+00
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	0.0E+00	0.0E+00
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	0.0E+00	0.0E+00
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00
Aldrin/Dieldrin/Endrin EEQ:	0.0E+00	0.0E+00

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0
Aquatic plant diet fraction =	0.35
Plant root diet fraction =	0
Fish diet fraction =	0.55
Aq. Invert diet fraction =	0.05
Terr. Invert diet fraction =	0
Mammal diet fraction =	0
Bird diet fraction =	0
Soil ingestion rate =	0
Sediment ingestion rate =	0.000889
Food ingestion rate =	0.0178
Body weight =	5.6
Home range =	11.21854
Water intake rate =	0.112
Site Area =	246
Area Use Factor (AUF) =	1
Exposure Duration (ED) =	1

Table E-19
Tier 1 COPCs
EEQs and Hazard Indices for the Bank Swallow at LHAAP
Industrial Sub-Area/Goose Praire Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF (Unitless)	Fish BAF (Unitless)	Aq. Invert. BAF (Unitless)	Terr. Invert. BAF (Unitless)	Aq. Plant BAF (Unitless)	Terr. Plant BAF (Unitless)	Plant Root BAF (Unitless)	Mammal BAF (Unitless)	Bird BAF (Unitless)
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00
2,3,7,8-TCDD TEQ	8.59E-09	mg/L	1.56E-06	mg/kg	9.34E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00
4,4'-DDD	0.00E+00	mg/L	2.97E-03	mg/kg	1.77E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.82E-02	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01
4,4'-DDT	0.00E+00	mg/L	3.04E-03	mg/kg	6.08E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.50E-03	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.08E-03	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Aluminum	2.10E+00	mg/L	1.03E+04	mg/kg	7.38E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E+00	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	6.94E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.45E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00
Aroclor 1254	0.00E+00	mg/L	5.10E-02	mg/kg	5.66E-02	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.69E-02	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00
Barium	0.00E+00	mg/L	1.34E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00
bis(2-ethylhexyl)phthalate	2.43E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00
Cadmium	0.00E+00	mg/L	5.24E-01	mg/kg	4.03E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.52E+01	8.28E-01	9.31E-01	9.31E-01	9.22E-01	9.22E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.84E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.82E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.40E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Copper	1.42E-02	mg/L	1.27E+01	mg/kg	1.87E+01	mg/kg	1.00E+00	5.92E+03	5.25E+00	6.54E-01	4.15E-01	3.28E-01	3.28E-01	1.49E-01	1.49E-01
Dieldrin	0.00E+00	mg/L	3.00E-03	mg/kg	3.29E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.80E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	9.74E-03	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.11E-04	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.77E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00
Iron	3.14E+00	mg/L	0.00E+00	mg/kg	1.68E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01		
Lead	7.76E-03	mg/L	7.66E+01	mg/kg	7.30E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	3.59E-01	3.92E-02	4.00E-02	4.00E-02	1.33E-02	1.33E-02
Manganese	2.73E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+03	2.10E+00	NA	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	7.96E-01	mg/kg	1.00E+00		2.87E+00	1.26E+00	NA	4.09E-01	4.09E-01	1.03E-01	1.03E-01
Mercury (methyl)	0.00E+00	mg/L	2.65E-01	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	6.78E-01	NA	NA		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00
Nickel	0.00E+00	mg/L	0.00E+00	mg/kg	8.88E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	NA	6.29E-02	6.29E-02	1.01E-01	1.01E-01
Nitrate	8.86E-01	mg/L	0.00E+00	mg/kg	1.12E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Nitrate/Nitrite	8.12E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	7.16E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	3.62E+00	mg/kg	1.00E+00			1.14E+00	NA	6.57E+00	6.57E+00	1.66E-01	1.66E-01
Selenium	3.74E-03	mg/L	1.29E+00	mg/kg	2.63E+00	mg/kg	1.00E+00	2.05E+02	4.50E+00	7.15E-01	5.20E-01	5.58E-01	5.58E-01	1.95E-01	1.95E-01
Silver	0.00E+00	mg/L	2.66E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.65E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Sulfate	1.42E+01	mg/L	6.05E+00	mg/kg	1.75E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Thallium	1.70E-03	mg/L	7.02E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.59E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Vanadium	0.00E+00	mg/L	0.00E+00	mg/kg	2.54E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03
Zinc	8.78E-02	mg/L	9.41E+01	mg/kg	7.62E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	4.65E+00	6.57E-01	7.21E-01	7.21E-01	4.51E-01	4.51E-01

Chemical	EED Surface Water mg/kg-d	EED Sediment mg/kg-d	EED Soil mg/kg-d	EED Fish mg/kg-d	EED Aq. Invert. mg/kg-d	EED Terr. Invert. mg/kg-d	EED Aq. Plants mg/kg-d	EED Terr. Plants mg/kg-d	EED Plant Roots mg/kg-d	EED Mammals mg/kg-d	EED Birds mg/kg-d	Total EED mg/kg-d	NOAEL mg/kg-d	EEQ N	LOAEL mg/kg-d	EEQ L
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.22E-01	0.00E+00	1.27E+00	0.00E+00
2,3,7,8-TCDD TEQ	2.06E-09	3.67E-09	0.00E+00	0.00E+00	1.45E-06	9.81E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.44E-06	1.40E-05	1.74E-01	1.40E-04	1.74E-02
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	1.80E+00	0.00E+00
2,4-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
4,4'-DDD	0.00E+00	7.00E-06	0.00E+00	0.00E+00	5.31E-05	1.30E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E-04	2.80E-03	6.79E-02	2.80E-02	6.79E-03
4,4'-DDE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.34E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.34E-03	5.80E-02	2.31E-02	5.80E-01	2.31E-03
4,4'-DDT	0.00E+00	7.16E-06	0.00E+00	0.00E+00	2.17E-04	4.62E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.87E-04	2.80E-03	2.45E-01	2.80E-02	2.45E-02
Aldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.14E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.14E-04	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.55E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.55E-04	2.14E+00	7.24E-05	1.07E+01	1.45E-05
Aluminum	5.03E-01	2.42E+01	0.00E+00	0.00E+00	1.97E+03	4.12E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E+03	1.10E+02	1.82E+01	3.29E+02	6.07E+00
Antimony	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E-02	NA	NA	NA	NA
Aroclor 1242	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.19E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.19E-04	4.10E-01	1.27E-03	1.23E+00	4.22E-04
Aroclor 1248	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E-04	1.80E-01	6.03E-04	1.80E+00	6.03E-05
Aroclor 1254	0.00E+00	1.20E-04	0.00E+00	0.00E+00	4.75E-02	4.34E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.20E-02	1.80E-01	2.89E-01	1.80E+00	2.89E-02
Aroclor 1260	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E-03	1.80E-01	7.58E-03	1.80E+00	7.58E-04
Aroclor 1268	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00
Barium	0.00E+00	3.15E-01	0.00E+00	0.00E+00	2.56E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.59E+01	2.08E+01	1.25E+00	4.17E+01	6.22E-01
Benzoic Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	5.82E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.82E-03	1.11E+00	5.24E-03	3.33E+00	1.75E-03
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Cadmium	0.00E+00	1.23E-03	0.00E+00	0.00E+00	1.78E-01	4.81E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.27E-01	1.45E+00	1.57E-01	2.00E+01	1.14E-02
Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.37E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.37E-05	2.14E+00	6.40E-06	1.07E+01	1.28E-06
Chromium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.72E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.72E-01	1.00E+00	2.72E-01	5.00E+00	5.43E-02
cis-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.54E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.54E-05	2.14E+00	1.18E-05	1.07E+01	2.37E-06
Copper	3.40E-03	2.98E-02	0.00E+00	0.00E+00	2.83E+00	5.77E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.92E+00	4.70E+01	6.21E-02	6.17E+01	4.73E-02
Dieldrin	0.00E+00	7.05E-06	0.00E+00	0.00E+00	7.39E-04	2.37E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.70E-04	7.70E-02	1.00E-02	2.31E-01	3.33E-03
Endrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.74E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.74E-05	3.00E-01	9.14E-05	9.00E-01	3.05E-05
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.25E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.25E-04	2.14E+00	3.39E-04	1.07E+01	6.78E-05
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.55E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.55E-05	9.20E-01	1.68E-05	2.76E+00	5.60E-06
Hexachlorobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E-05	NA	NA	NA	NA
HMX	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Iron	7.53E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.20E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.95E+00	NA	NA	NA	NA
Isobutanol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Lead	1.86E-03	1.80E-01	0.00E+00	0.00E+00	1.98E+00	1.24E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.28E+00	1.13E+00	2.02E+00	1.13E+01	2.02E-01
Manganese	6.54E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.54E-02	9.77E+02	6.70E-05	9.77E+03	6.70E-06
Mercury (inorganic)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.74E-03	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.74E-03	4.50E-01	1.05E-02	9.00E-01	5.26E-03
Mercury (methyl)	0.00E+00	6.23E-04	0.00E+00	0.00E+00	3.23E-02	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	3.29E-02	6.40E-03	5.14E+00	6.40E-02	5.14E-01
Mirex	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Nickel	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.98E-01	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.98E-01	7.74E+01	2.56E-03	1.07E+02	1.85E-03
Nitrate	2.12E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.02E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.18E-01	NA	NA	NA	NA
Nitrate/Nitrite	1.95E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.95E-02	NA	NA	NA	NA
Oxychlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00
p-Isopropyltoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+02	0.00E+00	3.20E+02	0.00E+00
Pentachloroanisole	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.14E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.14E-05	6.73E+00	7.64E-06	6.73E+01	7.64E-07
Pentachlorophenol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E+00	0.00E+00	6.73E+01	0.00E+00
Perchlorate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.95E-02	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.95E-02	6.50E+01	3.00E-04	1.30E+02	1.50E-04
Selenium	8.96E-04	3.04E-03	0.00E+00	0.00E+00	2.47E-01	8.88E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.60E-01	1.80E+00	1.44E-01	5.40E+00	4.81E-02
Silver	0.00E+00	6.26E-03	0.00E+00	0.00E+00	5.09E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.15E-01	5.44E+00	9.47E-02	5.44E+01	9.47E-03
Strontium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.48E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.48E-02	NA	NA	NA	NA
Sulfate	3.41E+00	1.42E-02	0.00E+00	0.00E+00	5.41E-01	9.45E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.91E+00	NA	NA	NA	NA
Thallium	4.08E-04	1.65E-03	0.00E+00	0.00E+00	1.34E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E-01	3.50E-01	3.90E-01	1.05E+00	1.30E-01
trans-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.67E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.67E-05	2.14E+00	1.25E-05	1.07E+01	2.50E-06
Vanadium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.06E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.06E-02	1.14E+01	9.26E-04	3.42E+01	3.09E-04
Zinc	2.10E-02	2.21E-01	0.00E+00	0.00E+00	3.01E+01	1.67E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.20E+01	1.45E+01	2.21E+00	1.31E+02	2.45E-01

	EEQ N	EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	4.6E-04	9.4E-05
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	3.4E-01	3.4E-02
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	3.0E-01	3.0E-02
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	5.2E-03	1.7E-03
Aldrin/Dieldrin/Endrin EEQ:	1.0E-02	3.4E-03

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0
Aquatic plant diet fraction =	0
Plant root diet fraction =	0
Fish diet fraction =	0
Aq. Invert diet fraction =	0.9
Terr. Invert diet fraction =	0.1
Mammal diet fraction =	0
Bird diet fraction =	0
Soil ingestion rate =	0
Sediment ingestion rate =	3.44E-05
Food ingestion rate =	0.00069
Body weight =	0.0146
Home range =	49.4
Water intake rate =	0.0035
Site Area =	2330
Area Use Factor (AUF) =	1
Exposure Duration (ED) =	1

Table E-20
Tier 2 COPCs
EEQs and Hazard Indices for the Bank Swallow at LHAAP
Industrial Sub-Area/Goose Praire Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL		LOAEL	
							---Unitless---									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	EEQ N	mg/kg-d	EEQ L
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.22E-01	0.00E+00	1.27E+00	0.00E+00
2,3,7,8-TCDD TEQ	7.00E-09	mg/L	1.27E-06	mg/kg	7.39E-06	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	1.68E-09	2.99E-09	0.00E+00	0.00E+00	2.52E-07	3.84E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.41E-07	1.40E-05	4.58E-02	1.40E-04	4.58E-03
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	1.80E+00	0.00E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
4,4'-DDD	0.00E+00	mg/L	2.56E-03	mg/kg	1.51E-03	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	6.02E-06	0.00E+00	0.00E+00	4.57E-05	6.37E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E-04	2.80E-03	4.12E-02	2.80E-02	4.12E-03
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E-02	mg/kg	1.00E+00		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.07E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.07E-04	5.80E-02	1.05E-02	5.80E-01	1.05E-03
4,4'-DDT	0.00E+00	mg/L	2.61E-03	mg/kg	4.99E-03	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	6.15E-06	0.00E+00	0.00E+00	1.87E-04	2.19E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.12E-04	2.80E-03	1.47E-01	2.80E-02	1.47E-02
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.38E-03	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.05E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.05E-05	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.28E-03	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.51E-05	2.14E+00	2.58E-05	1.07E+01	5.15E-06
Aluminum	1.73E+00	mg/L	8.98E+03	mg/kg	7.05E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	4.15E-01	2.11E+01	0.00E+00	0.00E+00	1.72E+03	1.43E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E+03	1.10E+02	1.59E+01	3.29E+02	5.29E+00
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E+00	mg/kg	1.00E+00			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.38E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.38E-03	NA	NA	NA	NA
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	5.90E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.54E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.54E-04	4.10E-01	6.19E-04	1.23E+00	2.06E-04
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.27E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.49E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.49E-05	1.80E-01	3.05E-04	1.80E+00	3.05E-05
Aroclor 1254	0.00E+00	mg/L	4.20E-02	mg/kg	4.34E-02	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	9.89E-05	0.00E+00	0.00E+00	8.34E-03	1.92E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.04E-02	1.80E-01	5.75E-02	1.80E+00	5.75E-03
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.47E-02	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.85E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.85E-04	1.80E-01	3.80E-03	1.80E+00	3.80E-04
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	2.78E-01	0.00E+00	0.00E+00	2.26E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.29E+01	2.08E+01	1.10E+00	4.17E+01	5.49E-01
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	1.43E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	3.42E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.42E-03	1.11E+00	3.08E-03	3.33E+00	1.03E-03
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Cadmium	0.00E+00	mg/L	4.84E-01	mg/kg	3.79E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	2.60E+01	8.58E-01	9.58E-01	9.58E-01	6.72E-01	6.72E-01	0.00E+00	1.14E-03	0.00E+00	0.00E+00	1.23E-02	4.65E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.00E-02	1.45E+00	4.14E-02	2.00E+01	3.00E-03
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.60E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.85E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.85E-06	2.14E+00	3.20E-06	1.07E+01	6.40E-07
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-02	1.00E+00	2.50E-02	5.00E+00	5.01E-03
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.76E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.19E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.19E-05	2.14E+00	5.54E-06	1.07E+01	1.11E-06
Copper	1.23E-02	mg/L	1.08E+01	mg/kg	1.76E+01	mg/kg	1.00E+00	1.11E+03	1.56E+00	6.85E-01	4.57E-01	3.40E-01	3.40E-01	8.97E-02	8.97E-02	2.94E-03	2.55E-02	0.00E+00	0.00E+00	7.19E-01	5.69E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.04E-01	4.70E+01	1.71E-02	6.17E+01	1.30E-02
Dieldrin	0.00E+00	mg/L	2.57E-03	mg/kg	2.78E-04	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	6.05E-06	0.00E+00	0.00E+00	6.34E-04	1.16E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.52E-04	7.70E-02	8.46E-03	2.31E-01	2.82E-03
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.31E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.38E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.38E-05	3.00E-01	4.60E-05	9.00E-01	1.53E-05
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-03	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.32E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.32E-04	2.14E+00	1.08E-04	1.07E+01	2.17E-05
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	1.86E-04	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.86E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.86E-06	9.20E-01	8.55E-06	2.76E+00	2.85E-06
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.54E-04	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.51E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.51E-06	NA	NA	NA	NA
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Iron	2.68E+00	mg/L	0.00E+00	mg/kg	1.59E+04	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	6.43E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.70E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.34E+00	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Lead	6.26E-03	mg/L	5.97E+01	mg/kg	6.49E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	3.67E-01	4.37E-02	4.22E-02	4.22E-02	1.16E-02	1.16E-02	1.50E-03	1.41E-01	0.00E+00	0.00E+00	1.80E-01	1.13E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.35E-01	1.13E+00	3.85E-01	1.13E+01	3.85E-02
Manganese	2.12E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.50E+02	4.20E-01	NA	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	5.08E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.08E-02	9.77E+02	5.20E-05	9.77E+03	5.20E-06
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	4.57E-01	mg/kg	1.00E+00		1.14E+00	1.83E+00	NA	5.28E-01	5.28E-01	9.15E-02	9.15E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.95E-03	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.95E-03	4.50E-01	8.77E-03	9.00E-01	4.38E-03
Mercury (methyl)	0.00E+00	mg/L	2.09E-01	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	7.56E-01	NA	NA			0.00E+00	4.91E-04	0.00E+00	0.00E+00	1.01E-02	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	1.06E-02	6.40E-03	1.65E+00	6.40E-02	1.65E-01
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Nickel	0.00E+00	mg/L	0.00E+00	mg/kg	8.33E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	NA	6.39E-02	6.39E-02	8.71E-02	8.71E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.17E-02	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.17E-02	7.74E+00	5.39E-03	1.07E+02	3.90E-04
Nitrate	4.70E-01	mg/L	0.00E+00	mg/kg	9.11E-01	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	1.13E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.29E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.14E-01	NA	NA	NA	NA
Nitrate/Nitrite	6.18E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02								1.48E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.48E-02	NA	NA	NA	NA
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+02	0.00E+00	3.20E+02	0.00E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E-05	6.73E+00	3.13E-06	6.73E+01	3.13E-07
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E+00	0.00E+00	6.73E+01	0.00E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E+00	mg/kg	1.00E+00			3.00E-01	NA	8.18E+00	8.18E+00	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.00E-03	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.00E-03	6.50E+01	4.62E-05	1.30E+02	2.31E-05
Selenium	3.23E-03	mg/L	1.10E+00	mg/kg	1.98E+00	mg/kg	1.00E+00	2.05E+02	4.50E+00	7.72E-01	5.12E-01	5.42E-01	5.42E-01	1.51E-01	1.51E-01	7.73E-04	2.59E-03	0.00E+00	0.00E+00	2.11E-01	7.22E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.21E-01	1.80E+00	1.23E-01	5.40E+00	4.10E-02
Silver	0.00E+00	mg/L	2.05E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	4.82E-03	0.00E+00	0.00E+00	3.92E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.97E-01	5.44E+00	7.30E-02	5.44E+01	7.30E-03
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.46E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.01E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.01E-02	NA	NA	NA	NA
Sulfate	1.10E+01	mg/L	4.59E+00	mg/kg	1.16E+02	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	2.64E+00	1.08E-02	0.00E+00	0.00E+00	8.19E-02	1.65E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.90E+00	NA	NA	NA	NA
Thallium	1.00E-03	mg/L	6.22E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00							2.40E-04	1.46E-03	0.00E+00	0.00E+00	1.19E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.21E-01	3.50E-01	3.45E-01	1.05E+00	1.15E-01
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.82E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.21E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.21E-05	2.14E+00	5.65E-06	1.07E+01	1.13E-06
Vanadium	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.73E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.73E-03	1.14E+01	4.15E-04	3.42E+01	1.38E-04
Zinc	6.50E-02	mg/L	7.78E+01	mg/kg	7.04E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	4.90E+00	7.15E-01	7.47E-01	7.47E-01	1.84E-01	1.84E-01	1.56E-02	1.83E-01	0.00E+00	0.00E+00	6.41E+00	1.63E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.24E+00	1.45E+01	5.68E-01	1.31E+02	6.29E-02

	EEQ N	EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.6E-04	3.3E-05
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	2.0E-01	2.0E-02
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	6.2E-02	6.4E-03
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	3.1E-03	1.0E-03
Aldrin/Dieldrin/Endrin EEQ:	8.5E-03	2.8E-03

Intake Equation:

$$E_j = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0
Aquatic plant diet fraction =	0
Plant root diet fraction =	0
Fish diet fraction =	0
Aq. Invert diet fraction =	0.9
Terr. Invert diet fraction =	0.1
Mammal diet fraction =	0
Bird diet fraction =	0
Soil ingestion rate =	0
Sediment ingestion rate =	3.44E-05
Food ingestion rate =	0.00069
Body weight =	0.0146
Home range =	247
Water intake rate =	0.0035
Site Area =	2330
Area Use Factor (AUF) =	1
Exposure Duration (ED) =	1

Table E-21
Tier 1 COPCs
EEQs and Hazard Indices for the American Woodcock at LHAAP
Industrial Sub-Area/Goose Prairie Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L
							--------Unitless--------									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	EEQ N	mg/kg-d	EEQ L
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.22E-01	0.00E+00	1.27E+00	0.00E+00
2,3,7,8-TCDD TEQ	8.59E-09	mg/L	1.56E-06	mg/kg	9.34E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	8.59E-10	0.00E+00	1.20E-07	0.00E+00	0.00E+00	2.56E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.57E-05	1.40E-05	1.84E+00	1.40E-04	1.84E-01
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	1.80E+00	0.00E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
4,4'-DDD	0.00E+00	mg/L	2.97E-03	mg/kg	1.77E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.27E-05	0.00E+00	0.00E+00	3.39E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.41E-03	2.80E-03	1.22E+00	2.80E-02	1.22E-01
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.82E-02	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	2.34E-04	0.00E+00	0.00E+00	3.50E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.53E-02	5.80E-02	6.08E-01	5.80E-01	6.08E-02
4,4'-DDT	0.00E+00	mg/L	3.04E-03	mg/kg	6.08E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	0.00E+00	7.81E-05	0.00E+00	0.00E+00	1.21E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.21E-02	2.80E-03	4.34E+00	2.80E-02	4.34E-01
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.50E-03	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.93E-05	0.00E+00	0.00E+00	2.98E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.00E-03	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.08E-03	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.67E-05	0.00E+00	0.00E+00	4.04E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.07E-03	2.14E+00	1.90E-03	1.07E+01	3.80E-04
Aluminum	2.10E+00	mg/L	1.03E+04	mg/kg	7.38E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	2.10E-01	0.00E+00	9.48E+01	0.00E+00	0.00E+00	1.07E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.02E+02	1.10E+02	1.85E+00	3.29E+02	6.15E-01
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E+00	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	3.24E-02	0.00E+00	0.00E+00	3.55E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.88E-01	NA	NA	NA	NA
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	6.94E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	8.92E-05	0.00E+00	0.00E+00	1.35E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E-02	4.10E-01	3.32E-02	1.23E+00	1.11E-02
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.45E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.87E-05	0.00E+00	0.00E+00	2.83E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.85E-03	1.80E-01	1.58E-02	1.80E+00	1.58E-03
Aroclor 1254	0.00E+00	mg/L	5.10E-02	mg/kg	5.66E-02	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	0.00E+00	7.27E-04	0.00E+00	0.00E+00	1.13E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.14E-01	1.80E-01	6.33E-01	1.80E+00	6.33E-02
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.69E-02	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	2.17E-04	0.00E+00	0.00E+00	3.56E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.58E-02	1.80E-01	1.99E-01	1.80E+00	1.99E-02
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00
Barium	0.00E+00	mg/L	1.34E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.08E+01	0.00E+00	4.17E+01	0.00E+00
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	2.43E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	2.43E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.43E-03	1.11E+00	2.19E-03	3.33E+00	7.29E-04
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Cadmium	0.00E+00	mg/L	5.24E-01	mg/kg	4.03E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.52E+01	8.28E-01	9.31E-01	9.31E-01	9.22E-01	9.22E-01	0.00E+00	0.00E+00	5.18E-03	0.00E+00	0.00E+00	1.26E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.26E+00	1.45E+00	8.69E-01	2.00E+01	6.30E-02
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.84E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.36E-06	0.00E+00	0.00E+00	3.58E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.60E-04	2.14E+00	1.68E-04	1.07E+01	3.37E-05
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.82E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	0.00E+00	0.00E+00	2.33E-01	0.00E+00	0.00E+00	7.09E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.32E+00	1.00E+00	7.32E+00	5.00E+00	1.46E+00
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.40E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.37E-06	0.00E+00	0.00E+00	6.62E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.66E-04	2.14E+00	3.11E-04	1.07E+01	6.22E-05
Copper	1.42E-02	mg/L	1.27E+01	mg/kg	1.87E+01	mg/kg	1.00E+00	5.92E+03	5.25E+00	6.54E-01	4.15E-01	3.28E-01	3.28E-01	1.49E-01	1.49E-01	1.42E-03	0.00E+00	2.40E-01	0.00E+00	0.00E+00	1.51E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.75E+00	4.70E+01	3.72E-02	6.17E+01	2.83E-02
Dieldrin	0.00E+00	mg/L	3.00E-03	mg/kg	3.29E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.22E-06	0.00E+00	0.00E+00	6.20E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.24E-04	7.70E-02	8.10E-03	2.31E-01	2.70E-03
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.80E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	4.88E-06	0.00E+00	0.00E+00	7.16E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.21E-04	3.00E-01	2.40E-03	9.00E-01	8.01E-04
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	9.74E-03	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.25E-04	0.00E+00	0.00E+00	1.89E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.91E-02	2.14E+00	8.90E-03	1.07E+01	1.78E-03
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.11E-04	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.71E-06	0.00E+00	0.00E+00	4.03E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.06E-04	9.20E-01	4.41E-04	2.76E+00	1.47E-04
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.77E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.27E-06	0.00E+00	0.00E+00	3.39E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.41E-04	NA	NA	NA	NA
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Iron	3.14E+00	mg/L	0.00E+00	mg/kg	1.68E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	3.14E-01	0.00E+00	2.16E+02	0.00E+00	0.00E+00	1.62E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.78E+02	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Lead	7.76E-03	mg/L	7.66E+01	mg/kg	7.30E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	3.59E-01	3.92E-02	4.00E-02	4.00E-02	1.33E-02	1.33E-02	7.76E-04	0.00E+00	9.38E-01	0.00E+00	0.00E+00	3.23E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.17E+00	1.13E+00	3.69E+00	1.13E+01	3.69E-01
Manganese	2.73E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+03	2.10E+00	NA	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	2.73E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.73E-02	9.77E+02	2.79E-05	9.77E+03	2.79E-06
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	7.96E-01	mg/kg	1.00E+00		2.87E+00	1.26E+00	NA	4.09E-01	4.09E-01	1.03E-01	1.03E-01	0.00E+00	0.00E+00	1.02E-02	0.00E+00	0.00E+00	1.24E-01	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.34E-01	4.50E-01	2.98E-01	9.00E-01	1.49E-01
Mercury (methyl)	0.00E+00	mg/L	2.65E-01	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	6.78E-01	NA	NA			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	6.40E-03	0.00E+00	6.40E-02	0.00E+00
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Nickel	0.00E+00	mg/L	0.00E+00	mg/kg	8.88E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	NA	6.29E-02	6.29E-02	1.01E-01	1.01E-01	0.00E+00	0.00E+00	1.14E-01	0.00E+00	0.00E+00	5.18E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.29E+00	7.74E+00	6.84E-01	1.07E+02	4.95E-02
Nitrate	8.86E-01	mg/L	0.00E+00	mg/kg	1.12E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	8.86E-02	0.00E+00	1.43E-02	0.00E+00	0.00E+00	1.57E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.60E-01	NA	NA	NA	NA
Nitrate/Nitrite	8.12E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03								8.12E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.12E-03	NA	NA	NA	NA
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+02	0.00E+00	3.20E+02	0.00E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	7.16E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	9.20E-06	0.00E+00	0.00E+00	1.34E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.35E-03	6.73E+00	2.01E-04	6.73E+01	2.01E-05
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E+00	0.00E+00	6.73E+01	0.00E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	3.62E+00	mg/kg	1.00E+00			1.14E+00	NA	6.57E+00	6.57E+00	1.66E-01	1.66E-01	0.00E+00	0.00E+00	4.64E-02	0.00E+00	0.00E+00	5.08E-01	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.55E-01	6.50E+01	8.54E-03	1.30E+02	4.27E-03
Selenium	3.74E-03	mg/L	1.29E+00	mg/kg	2.63E+00	mg/kg	1.00E+00	2.05E+02	4.50E+00	7.15E-01	5.20E-01	5.58E-01	5.58E-01	1.95E-01	1.95E-01	3.74E-04	0.00E+00	3.37E-02	0.00E+00	0.00E+00	2.32E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.66E-01	1.80E+00	1.48E-01	5.40E+00	4.92E-02
Silver	0.00E+00	mg/L	2.66E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E+00	0.00E+00	5.44E+01	0.00E+00
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.65E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	3.40E-01	0.00E+00	0.00E+00	9.09E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E+00	NA	NA	NA	NA
Sulfate	1.42E+01	mg/L	6.05E+00	mg/kg	1.75E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	1.42E+00	0.00E+00	2.25E+00	0.00E+00	0.00E+00	2.47E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.83E+01	NA	NA	NA	NA
Thallium	1.70E-03	mg/L	7.02E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00							1.70E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.70E-04	3.50E-01	4.86E-04	1.05E+00	1.62E-04
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.59E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.61E-06	0.00E+00	0.00E+00	6.98E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.02E-04	2.14E+00	3.28E-04	1.07E+01	6.56E-05
Vanadium	0.00E+00	mg/L	0.00E+00	mg/kg	2.54E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	0.00E+00	0.00E+00	3.26E-01	0.00E+00	0.00E+00	2.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.02E-01	1.14E+01	5.28E-02	3.42E+01	1.76E-02
Zinc	8.78E-02	mg/L	9.41E+01	mg/kg	7.62E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	4.65E+00	6.57E-01	7.21E-01	7.21E-01	4.51E-01	4.51E-01	8.78E-03	0.00E+00	9.79E-01	0.00E+00	0.00E+00	4.37E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.47E+01	1.45E+01	3.08E+00	1.31E+02	3.41E-01

	EEQ N	EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.2E-02	2.5E-03
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	6.2E+00	6.2E-01
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	8.8E-01	9.6E-02
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	2.2E-03	7.3E-04
Aldrin/Dieldrin/Endrin EEQ:	1.1E-02	3.5E-03

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\,x\,Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors	
Terrestrial plant diet fraction =	0
Aquatic plant diet fraction =	0
Plant root diet fraction =	0
Fish diet fraction =	0
Aq. Invert diet fraction =	0
Terr. Invert diet fraction =	1
Mammal diet fraction =	0
Bird diet fraction =	0
Soil ingestion rate =	0.002529
Sediment ingestion rate =	0
Food ingestion rate =	0.0243
Body weight =	0.197
Home range =	0.74
Water intake rate =	0.0197
Site Area =	2330
Area Use Factor (AUF) =	1
Exposure Duration (ED) =	1

Table E-22
Tier 2 COPCs
EEQs and Hazard Indices for the American Woodcock at LHAAP
Industrial Sub-Area/Goose Praire Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L
							--Unitless---------------------------------------									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	EEQ N	mg/kg-d	EEQ L
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.22E-01	0.00E+00	1.27E+00	0.00E+00
2,3,7,8-TCDD TEQ	7.00E-09	mg/L	1.27E-06	mg/kg	7.39E-06	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	7.00E-10	0.00E+00	9.48E-08	0.00E+00	0.00E+00	1.00E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.01E-05	1.40E-05	7.23E-01	1.40E-04	7.23E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	1.80E+00	0.00E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
4,4'-DDD	0.00E+00	mg/L	2.56E-03	mg/kg	1.51E-03	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.93E-05	0.00E+00	0.00E+00	1.66E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.68E-03	2.80E-03	6.01E-01	2.80E-02	6.01E-02
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E-02	mg/kg	1.00E+00		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	1.83E-04	0.00E+00	0.00E+00	1.59E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.60E-02	5.80E-02	2.76E-01	5.80E-01	2.76E-02
4,4'-DDT	0.00E+00	mg/L	2.61E-03	mg/kg	4.99E-03	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	6.40E-05	0.00E+00	0.00E+00	5.71E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.77E-03	2.80E-03	2.06E+00	2.80E-02	2.06E-01
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.38E-03	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.77E-05	0.00E+00	0.00E+00	1.58E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.60E-03	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.28E-03	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.65E-05	0.00E+00	0.00E+00	1.44E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.46E-03	2.14E+00	6.80E-04	1.07E+01	1.36E-04
Aluminum	1.73E+00	mg/L	8.98E+03	mg/kg	7.05E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	1.73E-01	0.00E+00	9.05E+01	0.00E+00	0.00E+00	3.74E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E+02	1.10E+02	1.17E+00	3.29E+02	3.89E-01
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E+00	mg/kg	1.00E+00			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	3.06E-02	0.00E+00	0.00E+00	8.82E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.19E-01	NA	NA	NA	NA
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	5.90E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	7.57E-05	0.00E+00	0.00E+00	6.63E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.70E-03	4.10E-01	1.64E-02	1.23E+00	5.45E-03
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.27E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.64E-05	0.00E+00	0.00E+00	1.43E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.45E-03	1.80E-01	8.05E-03	1.80E+00	8.05E-04
Aroclor 1254	0.00E+00	mg/L	4.20E-02	mg/kg	4.34E-02	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	5.57E-04	0.00E+00	0.00E+00	5.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.05E-02	1.80E-01	2.81E-01	1.80E+00	2.81E-02
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.47E-02	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	1.89E-04	0.00E+00	0.00E+00	1.79E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.81E-02	1.80E-01	1.00E-01	1.80E+00	1.00E-02
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.08E+01	0.00E+00	4.17E+01	0.00E+00
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	1.43E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	1.43E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.43E-03	1.11E+00	1.29E-03	3.33E+00	4.29E-04
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Cadmium	0.00E+00	mg/L	4.84E-01	mg/kg	3.79E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	2.60E+01	8.58E-01	9.58E-01	9.58E-01	6.72E-01	6.72E-01	0.00E+00	0.00E+00	4.86E-03	0.00E+00	0.00E+00	1.21E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.22E+00	1.45E+00	8.40E-01	2.00E+01	6.09E-02
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.60E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.05E-06	0.00E+00	0.00E+00	1.79E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.81E-04	2.14E+00	8.45E-05	1.07E+01	1.69E-05
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	0.00E+00	0.00E+00	2.22E-01	0.00E+00	0.00E+00	6.54E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.76E-01	1.00E+00	8.76E-01	5.00E+00	1.75E-01
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.76E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.54E-06	0.00E+00	0.00E+00	3.09E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.13E-04	2.14E+00	1.46E-04	1.07E+01	2.92E-05
Copper	1.23E-02	mg/L	1.08E+01	mg/kg	1.76E+01	mg/kg	1.00E+00	1.11E+03	1.56E+00	6.85E-01	4.57E-01	3.40E-01	3.40E-01	8.97E-02	8.97E-02	1.23E-03	0.00E+00	2.25E-01	0.00E+00	0.00E+00	1.48E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.71E+00	4.70E+01	3.64E-02	6.17E+01	2.77E-02
Dieldrin	0.00E+00	mg/L	2.57E-03	mg/kg	2.78E-04	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.57E-06	0.00E+00	0.00E+00	3.02E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.06E-04	7.70E-02	3.97E-03	2.31E-01	1.32E-03
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.31E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	4.26E-06	0.00E+00	0.00E+00	3.60E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.64E-04	3.00E-01	1.21E-03	9.00E-01	4.05E-04
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-03	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	6.93E-05	0.00E+00	0.00E+00	6.05E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.12E-03	2.14E+00	2.86E-03	1.07E+01	5.72E-04
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	1.86E-04	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.39E-06	0.00E+00	0.00E+00	2.05E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.08E-04	9.20E-01	2.26E-04	2.76E+00	7.52E-05
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.54E-04	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.98E-06	0.00E+00	0.00E+00	1.70E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.72E-04	NA	NA	NA	NA
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Iron	2.68E+00	mg/L	0.00E+00	mg/kg	1.59E+04	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	2.68E-01	0.00E+00	2.04E+02	0.00E+00	0.00E+00	7.05E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.74E+02	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Lead	6.26E-03	mg/L	5.97E+01	mg/kg	6.49E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	3.67E-01	4.37E-02	4.22E-02	4.22E-02	1.16E-02	1.16E-02	6.26E-04	0.00E+00	8.33E-01	0.00E+00	0.00E+00	2.94E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.77E+00	1.13E+00	3.34E+00	1.13E+01	3.34E-01
Manganese	2.12E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.50E+02	4.20E-01	NA	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	2.12E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.12E-02	9.77E+02	2.17E-05	9.77E+03	2.17E-06
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	4.57E-01	mg/kg	1.00E+00		1.14E+00	1.83E+00	NA	5.28E-01	5.28E-01	9.15E-02	9.15E-02	0.00E+00	0.00E+00	5.86E-03	0.00E+00	0.00E+00	1.03E-01	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E-01	4.50E-01	2.42E-01	9.00E-01	1.21E-01
Mercury (methyl)	0.00E+00	mg/L	2.09E-01	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	7.56E-01	NA	NA			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	6.40E-03	0.00E+00	6.40E-02	0.00E+00
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Nickel	0.00E+00	mg/L	0.00E+00	mg/kg	8.33E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	NA	6.39E-02	6.39E-02	8.71E-02	8.71E-02	0.00E+00	0.00E+00	1.07E-01	0.00E+00	0.00E+00	1.09E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E+00	7.74E+00	1.54E-01	1.07E+02	1.12E-02
Nitrate	4.70E-01	mg/L	0.00E+00	mg/kg	9.11E-01	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	4.70E-02	0.00E+00	1.17E-02	0.00E+00	0.00E+00	3.37E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.25E-02	NA	NA	NA	NA
Nitrate/Nitrite	6.18E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02								6.18E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.18E-03	NA	NA	NA	NA
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+02	0.00E+00	3.20E+02	0.00E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	6.53E-06	0.00E+00	0.00E+00	5.49E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.56E-04	6.73E+00	8.26E-05	6.73E+01	8.26E-06
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E+00	0.00E+00	6.73E+01	0.00E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E+00	mg/kg	1.00E+00			3.00E-01	NA	8.18E+00	8.18E+00	1.11E-01	1.11E-01	0.00E+00	0.00E+00	2.72E-02	0.00E+00	0.00E+00	7.83E-02	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E-01	6.50E+01	1.62E-03	1.30E+02	8.11E-04
Selenium	3.23E-03	mg/L	1.10E+00	mg/kg	1.98E+00	mg/kg	1.00E+00	2.05E+02	4.50E+00	7.72E-01	5.12E-01	5.42E-01	5.42E-01	1.51E-01	1.51E-01	3.23E-04	0.00E+00	2.54E-02	0.00E+00	0.00E+00	1.88E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E-01	1.80E+00	1.19E-01	5.40E+00	3.97E-02
Silver	0.00E+00	mg/L	2.05E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E+00	0.00E+00	5.44E+01	0.00E+00
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.46E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	3.16E-01	0.00E+00	0.00E+00	2.64E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.80E-01	NA	NA	NA	NA
Sulfate	1.10E+01	mg/L	4.59E+00	mg/kg	1.16E+02	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	1.10E+00	0.00E+00	1.50E+00	0.00E+00	0.00E+00	4.31E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.91E+00	NA	NA	NA	NA
Thallium	1.00E-03	mg/L	6.22E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00							1.00E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-04	3.50E-01	2.86E-04	1.05E+00	9.54E-05
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.82E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.62E-06	0.00E+00	0.00E+00	3.16E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.19E-04	2.14E+00	1.49E-04	1.07E+01	2.98E-05
Vanadium	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	0.00E+00	0.00E+00	3.06E-01	0.00E+00	0.00E+00	1.23E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.29E-01	1.14E+01	3.77E-02	3.42E+01	1.26E-02
Zinc	6.50E-02	mg/L	7.78E+01	mg/kg	7.04E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	4.90E+00	7.15E-01	7.47E-01	7.47E-01	1.84E-01	1.84E-01	6.50E-03	0.00E+00	9.04E-01	0.00E+00	0.00E+00	4.26E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.35E+01	1.45E+01	3.00E+00	1.31E+02	3.32E-01

	EEQ N	EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	4.1E-03	8.6E-04
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	2.9E+00	2.9E-01
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	4.1E-01	4.4E-02
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	1.3E-03	4.3E-04
Aldrin/Dieldrin/Endrin EEQ:	5.2E-03	1.7E-03

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value
Terrestrial plant diet fraction =	0
Aquatic plant diet fraction =	0
Plant root diet fraction =	0
Fish diet fraction =	0
Aq. Invert diet fraction =	0
Terr. Invert diet fraction =	1
Mammal diet fraction =	0
Bird diet fraction =	0
Soil ingestion rate =	0.002529
Sediment ingestion rate =	0
Food ingestion rate =	0.0243
Body weight =	0.197
Home range =	57
Water intake rate =	0.0197
Site Area =	2330
Area Use Factor (AUF) =	1
Exposure Duration (ED) =	1

Table E-23
Tier 1 COPCs
EEQs and Hazard Indices for the Belted Kingfisher at LHAAP
Industrial Sub-Area/Goose Praire Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L
							-------Unitless-------									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d	
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.22E-01	0.00E+00	1.27E+00	0.00E+00
2,3,7,8-TCDD TEQ	8.59E-09	mg/L	1.56E-06	mg/kg	9.34E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	9.28E-10	1.09E-08	0.00E+00	1.79E-04	5.97E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.79E-04	1.40E-05	1.28E+01	1.40E-04	1.28E+00
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	1.80E+00	0.00E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
4,4'-DDD	0.00E+00	mg/L	2.97E-03	mg/kg	1.77E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	2.08E-05	0.00E+00	0.00E+00	2.18E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.26E-05	2.80E-03	1.52E-02	2.80E-02	1.52E-03
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.82E-02	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.80E-02	0.00E+00	5.80E-01	0.00E+00
4,4'-DDT	0.00E+00	mg/L	3.04E-03	mg/kg	6.08E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	2.12E-05	0.00E+00	0.00E+00	8.94E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E-04	2.80E-03	3.95E-02	2.80E-02	3.95E-03
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.50E-03	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.08E-03	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00
Aluminum	2.10E+00	mg/L	1.03E+04	mg/kg	7.38E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	2.27E-01	7.19E+01	0.00E+00	1.10E+00	8.10E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.83E+02	1.10E+02	8.05E+00	3.29E+02	2.68E+00
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E+00	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	6.94E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.10E-01	0.00E+00	1.23E+00	0.00E+00
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.45E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00
Aroclor 1254	0.00E+00	mg/L	5.10E-02	mg/kg	5.66E-02	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	3.56E-04	0.00E+00	0.00E+00	1.95E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.99E-02	1.80E-01	1.10E-01	1.80E+00	1.10E-02
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.69E-02	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00
Barium	0.00E+00	mg/L	1.34E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	9.34E-01	0.00E+00	0.00E+00	1.05E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E+01	2.08E+01	5.51E-01	4.17E+01	2.75E-01
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	2.43E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	2.62E-03	0.00E+00	0.00E+00	4.60E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.61E+00	1.11E+00	4.15E+00	3.33E+00	1.38E+00
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Cadmium	0.00E+00	mg/L	5.24E-01	mg/kg	4.03E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.52E+01	8.28E-01	9.31E-01	9.31E-01	9.22E-01	9.22E-01	0.00E+00	3.66E-03	0.00E+00	0.00E+00	7.32E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.69E-02	1.45E+00	5.30E-02	2.00E+01	3.84E-03
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.84E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.82E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.40E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00
Copper	1.42E-02	mg/L	1.27E+01	mg/kg	1.87E+01	mg/kg	1.00E+00	5.92E+03	5.25E+00	6.54E-01	4.15E-01	3.28E-01	3.28E-01	1.49E-01	1.49E-01	1.53E-03	8.84E-02	0.00E+00	1.03E+01	1.16E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E+01	4.70E+01	2.45E-01	6.17E+01	1.87E-01
Dieldrin	0.00E+00	mg/L	3.00E-03	mg/kg	3.29E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	2.09E-05	0.00E+00	0.00E+00	3.04E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.25E-04	7.70E-02	4.22E-03	2.31E-01	1.41E-03
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.80E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-02	0.00E+00	1.00E-01	0.00E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	9.74E-03	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.11E-04	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.20E-01	0.00E+00	2.76E+00	0.00E+00
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.77E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Iron	3.14E+00	mg/L	0.00E+00	mg/kg	1.68E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	3.40E-01	0.00E+00	0.00E+00	3.85E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.85E+02	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Lead	7.76E-03	mg/L	7.66E+01	mg/kg	7.30E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	3.59E-01	3.92E-02	4.00E-02	4.00E-02	1.33E-02	1.33E-02	8.39E-04	5.35E-01	0.00E+00	1.43E+00	8.13E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.77E+00	3.85E+00	7.20E-01	1.16E+01	2.40E-01
Manganese	2.73E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+03	2.10E+00	NA	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	2.95E-02	0.00E+00	0.00E+00	6.68E+01	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.68E+01	9.77E+02	6.84E-02	9.77E+03	6.84E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	7.96E-01	mg/kg	1.00E+00		2.87E+00	1.26E+00	NA	4.09E-01	4.09E-01	1.03E-01	1.03E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.50E-01	0.00E+00	9.00E-01	0.00E+00
Mercury (methyl)	0.00E+00	mg/L	2.65E-01	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	6.78E-01	NA	NA			0.00E+00	1.85E-03	0.00E+00	0.00E+00	1.33E-02	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	1.51E-02	6.40E-03	2.36E+00	6.40E-02	2.36E-01
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Nickel	0.00E+00	mg/L	0.00E+00	mg/kg	8.88E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	NA	6.29E-02	6.29E-02	1.01E-01	1.01E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.74E+00	0.00E+00	1.07E+02	0.00E+00
Nitrate	8.86E-01	mg/L	0.00E+00	mg/kg	1.12E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	9.58E-02	0.00E+00	0.00E+00	1.16E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.16E+02	NA	NA	NA	NA
Nitrate/Nitrite	8.12E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03								8.78E-03	0.00E+00	0.00E+00	1.06E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.06E+01	NA	NA	NA	NA
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+02	0.00E+00	3.20E+02	0.00E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	7.16E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E+00	0.00E+00	6.73E+01	0.00E+00
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E+00	0.00E+00	6.73E+01	0.00E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	3.62E+00	mg/kg	1.00E+00			1.14E+00	NA	6.57E+00	6.57E+00	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.50E+01	0.00E+00	1.30E+02	0.00E+00
Selenium	3.74E-03	mg/L	1.29E+00	mg/kg	2.63E+00	mg/kg	1.00E+00	2.05E+02	4.50E+00	7.15E-01	5.20E-01	5.58E-01	5.58E-01	1.95E-01	1.95E-01	4.04E-04	9.01E-03	0.00E+00	9.38E-02	1.02E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.05E-01	4.40E-01	4.65E-01	1.50E+00	1.36E-01
Silver	0.00E+00	mg/L	2.66E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	1.86E-02	0.00E+00	0.00E+00	2.09E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.28E-01	5.44E+00	4.19E-02	5.44E+01	4.19E-03
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.65E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Sulfate	1.42E+01	mg/L	6.05E+00	mg/kg	1.75E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	1.54E+00	4.23E-02	0.00E+00	1.86E+03	2.22E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.86E+03	NA	NA	NA	NA
Thallium	1.70E-03	mg/L	7.02E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00							1.84E-04	4.90E-03	0.00E+00	3.31E+00	5.52E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.37E+00	3.50E-01	9.62E+00	1.05E+00	3.21E+00
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.59E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00
Vanadium	0.00E+00	mg/L	0.00E+00	mg/kg	2.54E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.14E+01	0.00E+00	3.42E+01	0.00E+00
Zinc	8.78E-02	mg/L	9.41E+01	mg/kg	7.62E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	4.65E+00	6.57E-01	7.21E-01	7.21E-01	4.51E-01	4.51E-01	9.49E-03	6.57E-01	0.00E+00	5.37E+01	1.24E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.68E+01	1.45E+01	4.60E+00	1.31E+02	5.10E-01

	EEQ N	EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	0.0E+00	0.0E+00
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	5.5E-02	5.5E-03
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.1E-01	1.1E-02
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	4.2E+00	1.4E+00
Aldrin/Dieldrin/Endrin EEQ:	4.2E-03	1.4E-03

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\,x\,Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value
Terrestrial plant diet fraction =	0
Aquatic plant diet fraction =	0
Plant root diet fraction =	0
Fish diet fraction =	0.875
Aq. Invert diet fraction =	0.125
Terr. Invert diet fraction =	0
Mammal diet fraction =	0
Bird diet fraction =	0
Soil ingestion rate =	0
Sediment ingestion rate =	0.001034
Food ingestion rate =	0.0207
Body weight =	0.148
Home range =	118.6101
Water intake rate =	0.016
Site Area =	246
Area Use Factor (AUF) =	1
Exposure Duration (ED) =	1

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Table E-24
Tier 2 COPCs
EEQs and Hazard Indices for the Belted Kingfisher at LHAAP
Industrial Sub-Area/Goose Praire Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L
							-----Unitless-----									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d	
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.22E-01	0.00E+00	1.27E+00	0.00E+00
2,3,7,8-TCDD TEQ	7.00E-09	mg/L	1.27E-06	mg/kg	7.39E-06	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	1.00E-10	1.18E-09	0.00E+00	2.63E-06	1.38E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.64E-06	1.40E-05	1.89E-01	1.40E-04	1.89E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	1.80E+00	0.00E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
4,4'-DDD	0.00E+00	mg/L	2.56E-03	mg/kg	1.51E-03	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	2.37E-06	0.00E+00	0.00E+00	2.49E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.87E-06	2.80E-03	1.74E-03	2.80E-02	1.74E-04
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E-02	mg/kg	1.00E+00		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.80E-02	0.00E+00	5.80E-01	0.00E+00
4,4'-DDT	0.00E+00	mg/L	2.61E-03	mg/kg	4.99E-03	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	2.42E-06	0.00E+00	0.00E+00	1.02E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.26E-05	2.80E-03	4.50E-03	2.80E-02	4.50E-04
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.38E-03	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.28E-03	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00
Aluminum	1.73E+00	mg/L	8.98E+03	mg/kg	7.05E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	2.48E-02	8.32E+00	0.00E+00	1.21E-01	9.38E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.02E+02	1.10E+02	9.32E-01	3.29E+02	3.11E-01
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E+00	mg/kg	1.00E+00			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	5.90E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.10E-01	0.00E+00	1.23E+00	0.00E+00
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.27E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00
Aroclor 1254	0.00E+00	mg/L	4.20E-02	mg/kg	4.34E-02	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	3.89E-05	0.00E+00	0.00E+00	4.55E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.94E-04	1.80E-01	2.75E-03	1.80E+00	2.75E-04
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.47E-02	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	1.09E-01	0.00E+00	0.00E+00	1.23E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.34E+00	2.08E+01	6.45E-02	4.17E+01	3.22E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	1.43E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	2.05E-04	0.00E+00	0.00E+00	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.66E-01	1.11E+00	1.50E-01	3.33E+00	4.99E-02
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Cadmium	0.00E+00	mg/L	4.84E-01	mg/kg	3.79E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	2.60E+01	8.58E-01	9.58E-01	9.58E-01	6.72E-01	6.72E-01	0.00E+00	4.49E-04	0.00E+00	0.00E+00	6.74E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.12E-03	1.45E+00	7.74E-04	2.00E+01	5.61E-05
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.60E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.76E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00
Copper	1.23E-02	mg/L	1.08E+01	mg/kg	1.76E+01	mg/kg	1.00E+00	1.11E+03	1.56E+00	6.85E-01	4.57E-01	3.40E-01	3.40E-01	8.97E-02	8.97E-02	1.76E-04	1.00E-02	0.00E+00	2.21E-01	3.92E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.71E-01	4.70E+01	5.76E-03	6.17E+01	4.39E-03
Dieldrin	0.00E+00	mg/L	2.57E-03	mg/kg	2.78E-04	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	2.38E-06	0.00E+00	0.00E+00	3.46E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.70E-05	7.70E-02	4.80E-04	2.31E-01	1.60E-04
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.31E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-02	0.00E+00	1.00E-01	0.00E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-03	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	1.86E-04	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.20E-01	0.00E+00	2.76E+00	0.00E+00
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.54E-04	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Iron	2.68E+00	mg/L	0.00E+00	mg/kg	1.59E+04	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	3.85E-02	0.00E+00	0.00E+00	1.09E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E+01	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Lead	6.26E-03	mg/L	5.97E+01	mg/kg	6.49E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	3.67E-01	4.37E-02	4.22E-02	4.22E-02	1.16E-02	1.16E-02	8.98E-05	5.54E-02	0.00E+00	4.55E-02	9.84E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E-01	3.85E+00	2.88E-02	1.16E+01	9.60E-03
Manganese	2.12E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.50E+02	4.20E-01	NA	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	3.04E-03	0.00E+00	0.00E+00	8.61E-01	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.64E-01	9.77E+02	8.85E-04	9.77E+03	8.85E-05
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	4.57E-01	mg/kg	1.00E+00		1.14E+00	1.83E+00	NA	5.28E-01	5.28E-01	9.15E-02	9.15E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.50E-01	0.00E+00	9.00E-01	0.00E+00
Mercury (methyl)	0.00E+00	mg/L	2.09E-01	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	7.56E-01	NA	NA			0.00E+00	1.94E-04	0.00E+00	0.00E+00	5.50E-04	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	7.44E-04	6.40E-03	1.16E-01	6.40E-02	1.16E-02
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Nickel	0.00E+00	mg/L	0.00E+00	mg/kg	8.33E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	NA	6.39E-02	6.39E-02	8.71E-02	8.71E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.74E+00	0.00E+00	1.07E+02	0.00E+00
Nitrate	4.70E-01	mg/L	0.00E+00	mg/kg	9.11E-01	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	6.75E-03	0.00E+00	0.00E+00	2.30E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.31E+00	NA	NA	NA	NA
Nitrate/Nitrite	6.18E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02								8.87E-04	0.00E+00	0.00E+00	3.02E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.03E-01	NA	NA	NA	NA
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+02	0.00E+00	3.20E+02	0.00E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E+00	0.00E+00	6.73E+01	0.00E+00
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E+00	0.00E+00	6.73E+01	0.00E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E+00	mg/kg	1.00E+00			3.00E-01	NA	8.18E+00	8.18E+00	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.50E+01	0.00E+00	1.30E+02	0.00E+00
Selenium	3.23E-03	mg/L	1.10E+00	mg/kg	1.98E+00	mg/kg	1.00E+00	2.05E+02	4.50E+00	7.72E-01	5.12E-01	5.42E-01	5.42E-01	1.51E-01	1.51E-01	4.63E-05	1.02E-03	0.00E+00	1.07E-02	1.15E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.33E-02	4.40E-01	5.30E-02	1.50E+00	1.55E-02
Silver	0.00E+00	mg/L	2.05E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	1.90E-03	0.00E+00	0.00E+00	2.14E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.33E-02	5.44E+00	4.28E-03	5.44E+01	4.28E-04
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.46E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Sulfate	1.10E+01	mg/L	4.59E+00	mg/kg	1.16E+02	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	1.58E-01	4.25E-03	0.00E+00	5.38E+01	4.47E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.40E+01	NA	NA	NA	NA
Thallium	1.00E-03	mg/L	6.22E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00							1.44E-05	5.77E-04	0.00E+00	1.22E-03	6.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.31E-03	3.50E-01	2.37E-02	1.05E+00	7.91E-03
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.82E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00
Vanadium	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.14E+01	0.00E+00	3.42E+01	0.00E+00
Zinc	6.50E-02	mg/L	7.78E+01	mg/kg	7.04E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	4.90E+00	7.15E-01	7.47E-01	7.47E-01	1.84E-01	1.84E-01	9.33E-04	7.22E-02	0.00E+00	3.07E+00	3.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.50E+00	1.45E+01	2.41E-01	1.31E+02	2.67E-02

	EEQ N	EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	0.0E+00	0.0E+00
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	6.2E-03	6.2E-04
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	2.7E-03	2.7E-04
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	1.5E-01	5.0E-02
Aldrin/Dieldrin/Endrin EEQ:	4.8E-04	1.6E-04

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\, x Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0
Aquatic plant diet fraction =	0
Plant root diet fraction =	0
Fish diet fraction =	0.875
Aq. Invert diet fraction =	0.125
Terr. Invert diet fraction =	0
Mammal diet fraction =	0
Bird diet fraction =	0
Soil ingestion rate =	0
Sediment ingestion rate =	0.001034
Food ingestion rate =	0.0207
Body weight =	0.148
Home range =	1853
Water intake rate =	0.016
Site Area =	246
Area Use Factor (AUF) =	0.132758
Exposure Duration (ED) =	1

Table E-25
Tier 1 COPCs
EEQs and Hazard Indices for the Red-tailed Hawk at LHAAP
Industrial Sub-Area/Goose Praire Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L
							-----	-----	-----	-----	-----Unitless-----	-----	-----	-----		mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d	
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.22E-01	0.00E+00	1.27E+00	0.00E+00
2,3,7,8-TCDD TEQ	8.59E-09	mg/L	1.56E-06	mg/kg	9.34E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	4.88E-10	0.00E+00	5.62E-09	1.14E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.08E-08	1.88E-09	1.14E-05	1.40E-05	8.18E-01	1.40E-04	8.18E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	1.80E+00	0.00E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
4,4'-DDD	0.00E+00	mg/L	2.97E-03	mg/kg	1.77E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.07E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.87E-05	6.76E-06	4.65E-05	2.80E-03	1.66E-02	2.80E-02	1.66E-03
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.82E-02	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	1.10E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.43E-04	5.99E-05	4.14E-04	5.80E-02	7.14E-03	5.80E-01	7.14E-04
4,4'-DDT	0.00E+00	mg/L	3.04E-03	mg/kg	6.08E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	0.00E+00	3.66E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.92E-04	3.35E-05	2.29E-04	2.80E-03	8.17E-02	2.80E-02	8.17E-03
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.50E-03	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	9.04E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.28E-05	5.73E-06	3.95E-05	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.08E-03	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.25E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.55E-05	7.94E-06	5.46E-05	2.14E+00	2.55E-05	1.07E+01	5.11E-06
Aluminum	2.10E+00	mg/L	1.03E+04	mg/kg	7.38E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	1.19E-01	0.00E+00	4.44E+00	7.06E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.21E+00	2.12E-01	6.06E+00	1.10E+02	5.52E-02	3.29E+02	1.84E-02
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E+00	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	1.52E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.96E-03	1.39E-03	1.09E-02	NA	NA	NA	NA
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	6.94E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.18E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E-04	2.65E-05	1.82E-04	4.10E-01	4.45E-04	1.23E+00	1.48E-04
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.45E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	8.75E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.18E-05	5.54E-06	3.82E-05	1.80E-01	2.12E-04	1.80E+00	2.12E-05
Aroclor 1254	0.00E+00	mg/L	5.10E-02	mg/kg	5.66E-02	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	0.00E+00	3.41E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.14E-03	1.99E-04	1.37E-03	1.80E-01	7.63E-03	1.80E+00	7.63E-04
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.69E-02	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	1.02E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.16E-04	1.08E-04	7.34E-04	1.80E-01	4.08E-03	1.80E+00	4.08E-04
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00
Barium	0.00E+00	mg/L	1.34E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.08E+01	0.00E+00	4.17E+01	0.00E+00
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	2.43E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	1.38E-03	0.00E+00	0.00E+00	2.95E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.96E-01	1.11E+00	2.67E-01	3.33E+00	8.89E-02
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Cadmium	0.00E+00	mg/L	5.24E-01	mg/kg	4.03E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.52E+01	8.28E-01	9.31E-01	9.31E-01	9.22E-01	9.22E-01	0.00E+00	0.00E+00	2.43E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.05E-03	1.23E-03	8.53E-03	1.45E+00	5.88E-03	2.00E+01	4.26E-04
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.84E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.11E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E-06	7.02E-07	4.83E-06	2.14E+00	2.26E-06	1.07E+01	4.52E-07
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.82E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	0.00E+00	0.00E+00	1.09E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E-01	2.01E-02	1.46E-01	1.00E+00	1.46E-01	5.00E+00	2.92E-02
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.40E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.05E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.44E-06	1.30E-06	8.94E-06	2.14E+00	4.18E-06	1.07E+01	8.36E-07
Copper	1.42E-02	mg/L	1.27E+01	mg/kg	1.87E+01	mg/kg	1.00E+00	5.92E+03	5.25E+00	6.54E-01	4.15E-01	3.28E-01	3.28E-01	1.49E-01	1.49E-01	8.05E-04	0.00E+00	1.12E-02	6.56E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.29E-02	9.25E-03	7.30E-01	4.70E+01	1.55E-02	6.17E+01	1.18E-02
Dieldrin	0.00E+00	mg/L	3.00E-03	mg/kg	3.29E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.98E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.19E-06	1.26E-06	8.65E-06	7.70E-02	1.12E-04	2.31E-01	3.74E-05
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.80E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	2.29E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.77E-06	1.53E-06	1.05E-05	1.00E-02	1.05E-03	1.00E-01	1.05E-04
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	9.74E-03	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	5.86E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.13E-04	3.72E-05	2.56E-04	2.14E+00	1.20E-04	1.07E+01	2.39E-05
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.11E-04	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.27E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.61E-06	8.04E-07	5.54E-06	9.20E-01	6.02E-06	2.76E+00	2.01E-06
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.77E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.07E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.87E-06	6.76E-07	4.65E-06	NA	NA	NA	NA
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Iron	3.14E+00	mg/L	0.00E+00	mg/kg	1.68E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	1.79E-01	0.00E+00	1.01E+01	2.46E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.60E-01	1.15E-01	3.57E+01	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Lead	7.76E-03	mg/L	7.66E+01	mg/kg	7.30E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	3.59E-01	3.92E-02	4.00E-02	4.00E-02	1.33E-02	1.33E-02	4.41E-04	0.00E+00	4.40E-02	9.12E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.84E-02	3.22E-03	1.57E-01	3.85E+00	4.08E-02	1.16E+01	1.36E-02
Manganese	2.73E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+03	2.10E+00	NA	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	1.55E-02	0.00E+00	0.00E+00	4.27E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.29E+00	9.77E+02	4.39E-03	9.77E+03	4.39E-04
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	7.96E-01	mg/kg	1.00E+00		2.87E+00	1.26E+00	NA	4.09E-01	4.09E-01	1.03E-01	1.03E-01	0.00E+00	0.00E+00	4.79E-04	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	1.55E-03	2.71E-04	2.30E-03	4.50E-01	5.12E-03	9.00E-01	2.56E-03
Mercury (methyl)	0.00E+00	mg/L	2.65E-01	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	6.78E-01	NA	NA			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	6.40E-03	0.00E+00	6.40E-02	0.00E+00
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Nickel	0.00E+00	mg/L	0.00E+00	mg/kg	8.88E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	NA	6.29E-02	6.29E-02	1.01E-01	1.01E-01	0.00E+00	0.00E+00	5.34E-03	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	1.70E-02	2.97E-03	2.53E-02	7.74E+00	3.27E-03	1.07E+02	2.37E-04
Nitrate	8.86E-01	mg/L	0.00E+00	mg/kg	1.12E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	5.04E-02	0.00E+00	6.72E-04	7.41E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.52E-03	6.15E-04	7.46E+00	NA	NA	NA	NA
Nitrate/Nitrite	8.12E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03								4.61E-03	0.00E+00	0.00E+00	6.79E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.83E-01	NA	NA	NA	NA
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+02	0.00E+00	3.20E+02	0.00E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	7.16E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.31E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.57E-05	2.73E-06	1.88E-05	6.73E+00	2.80E-06	6.73E+01	2.80E-07
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E+00	0.00E+00	6.73E+01	0.00E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	3.62E+00	mg/kg	1.00E+00			1.14E+00	NA	6.57E+00	6.57E+00	1.66E-01	1.66E-01	0.00E+00	0.00E+00	2.18E-03	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	1.14E-02	1.99E-03	1.56E-02	6.50E+01	2.39E-04	1.30E+02	1.20E-04
Selenium	3.74E-03	mg/L	1.29E+00	mg/kg	2.63E+00	mg/kg	1.00E+00	2.05E+02	4.50E+00	7.15E-01	5.20E-01	5.58E-01	5.58E-01	1.95E-01	1.95E-01	2.12E-04	0.00E+00	1.58E-03	6.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.72E-03	1.70E-03	1.92E-02	4.40E-01	4.37E-02	1.50E+00	1.28E-02
Silver	0.00E+00	mg/L	2.66E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E+00	0.00E+00	5.44E+01	0.00E+00
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.65E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	1.60E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.36E-02	1.46E-02	1.14E-01	NA	NA	NA	NA
Sulfate	1.42E+01	mg/L	6.05E+00	mg/kg	1.75E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	8.10E-01	0.00E+00	1.06E-01	1.19E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.53E-01	9.65E-02	1.21E+02	NA	NA	NA	NA
Thallium	1.70E-03	mg/L	7.02E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00							9.66E-05	0.00E+00	0.00E+00	2.12E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.12E-01	3.50E-01	6.05E-01	1.05E+00	2.02E-01
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.59E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.16E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.84E-06	1.37E-06	9.43E-06	2.14E+00	4.41E-06	1.07E+01	8.81E-07
Vanadium	0.00E+00	mg/L	0.00E+00	mg/kg	2.54E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	0.00E+00	0.00E+00	1.53E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.85E-03	4.98E-04	1.86E-02	1.14E+01	1.63E-03	3.42E+01	5.45E-04
Zinc	8.78E-02	mg/L	9.41E+01	mg/kg	7.62E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	4.65E+00	6.57E-01	7.21E-01	7.21E-01	4.51E-01	4.51E-01	4.99E-03	0.00E+00	4.59E-02	3.44E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.52E-01	1.14E-01	4.25E+00	1.45E+01	2.93E-01	1.31E+02	3.25E-02

	EEQ N	EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.6E-04	3.3E-05
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	1.1E-01	1.1E-02
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.2E-02	1.3E-03
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	2.7E-01	8.9E-02
Aldrin/Dieldrin/Endrin EEQ:	1.2E-03	1.4E-04

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0
Aquatic plant diet fraction =	0
Plant root diet fraction =	0
Fish diet fraction =	0.26
Aq. Invert diet fraction =	0
Terr. Invert diet fraction =	0
Mammal diet fraction =	0.63
Bird diet fraction =	0.11
Soil ingestion rate =	0.000678
Sediment ingestion rate =	0
Food ingestion rate =	0.0339
Body weight =	1.126
Home range =	941
Water intake rate =	0.064
Site Area =	2330
Area Use Factor (AUF) =	1
Exposure Duration (ED) =	1

Table E-26
Tier 2 COPCs
EEQs and Hazard Indices for the Red-tailed Hawk at LHAAP
Industrial Sub-Area/Goose Praire Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L
									--Unitless--							mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d	
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.22E-01	0.00E+00	1.27E+00	0.00E+00
2,3,7,8-TCDD TEQ	7.00E-09	mg/L	1.27E-06	mg/kg	7.39E-06	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	3.98E-10	0.00E+00	4.45E-09	1.26E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.62E-09	1.16E-09	1.28E-06	1.40E-05	9.12E-02	1.40E-04	9.12E-03
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	1.80E+00	0.00E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
4,4'-DDD	0.00E+00	mg/L	2.56E-03	mg/kg	1.51E-03	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	9.06E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-05	4.37E-06	3.03E-05	2.80E-03	1.08E-02	2.80E-02	1.08E-03
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E-02	mg/kg	1.00E+00		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	8.60E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.55E-04	4.46E-05	3.08E-04	5.80E-02	5.32E-03	5.80E-01	5.32E-04
4,4'-DDT	0.00E+00	mg/L	2.61E-03	mg/kg	4.99E-03	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	3.00E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.39E-05	1.47E-05	1.02E-04	2.80E-03	3.63E-02	2.80E-02	3.63E-03
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.38E-03	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	8.31E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.30E-05	4.01E-06	2.78E-05	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.28E-03	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	7.73E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.13E-05	3.73E-06	2.58E-05	2.14E+00	1.21E-05	1.07E+01	2.41E-06
Aluminum	1.73E+00	mg/L	8.98E+03	mg/kg	7.05E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	9.83E-02	0.00E+00	4.24E+00	5.82E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.85E-01	1.55E-01	5.44E+00	1.10E+02	4.96E-02	3.29E+02	1.65E-02
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E+00	mg/kg	1.00E+00			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	1.43E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.01E-03	8.74E-04	7.31E-03	NA	NA	NA	NA
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	5.90E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.55E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.80E-05	1.71E-05	1.19E-04	4.10E-01	2.89E-04	1.23E+00	9.65E-05
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.27E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	7.67E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.12E-05	3.70E-06	2.56E-05	1.80E-01	1.42E-04	1.80E+00	1.42E-05
Aroclor 1254	0.00E+00	mg/L	4.20E-02	mg/kg	4.34E-02	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	2.61E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.09E-04	7.14E-05	5.07E-04	1.80E-01	2.82E-03	1.80E+00	2.82E-04
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.47E-02	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	8.87E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.67E-04	8.15E-05	5.57E-04	1.80E-01	3.10E-03	1.80E+00	3.10E-04
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.08E+01	0.00E+00	4.17E+01	0.00E+00
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	1.43E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	8.12E-04	0.00E+00	0.00E+00	7.99E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.07E-02	1.11E+00	7.27E-02	3.33E+00	2.42E-02
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Cadmium	0.00E+00	mg/L	4.84E-01	mg/kg	3.79E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	2.60E+01	8.58E-01	9.58E-01	9.58E-01	6.72E-01	6.72E-01	0.00E+00	0.00E+00	2.28E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.83E-03	8.44E-04	5.90E-03	1.45E+00	4.07E-03	2.00E+01	2.95E-04
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.60E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	9.60E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.65E-06	4.63E-07	3.21E-06	2.14E+00	1.50E-06	1.07E+01	3.00E-07
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	0.00E+00	0.00E+00	1.04E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.78E-02	4.85E-03	4.31E-02	1.00E+00	4.31E-02	5.00E+00	8.61E-03
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.76E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.66E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.59E-06	8.01E-07	5.56E-06	2.14E+00	2.60E-06	1.07E+01	5.19E-07
Copper	1.23E-02	mg/L	1.08E+01	mg/kg	1.76E+01	mg/kg	1.00E+00	1.11E+03	1.56E+00	6.85E-01	4.57E-01	3.40E-01	3.40E-01	8.97E-02	8.97E-02	6.97E-04	0.00E+00	1.06E-02	1.07E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.99E-02	5.22E-03	1.53E-01	4.70E+01	3.25E-03	6.17E+01	2.48E-03
Dieldrin	0.00E+00	mg/L	2.57E-03	mg/kg	2.78E-04	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.67E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.63E-06	8.08E-07	5.60E-06	7.70E-02	7.27E-05	2.31E-01	2.42E-05
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.31E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	2.00E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.63E-06	1.33E-06	9.17E-06	1.00E-02	9.17E-04	1.00E-01	9.17E-05
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-03	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.25E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.98E-05	1.57E-05	1.09E-04	2.14E+00	5.08E-05	1.07E+01	1.02E-05
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	1.86E-04	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.12E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.09E-06	5.40E-07	3.74E-06	9.20E-01	4.07E-06	2.76E+00	1.36E-06
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.54E-04	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	9.27E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.56E-06	4.47E-07	3.10E-06	NA	NA	NA	NA
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Iron	2.68E+00	mg/L	0.00E+00	mg/kg	1.59E+04	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	1.52E-01	0.00E+00	9.55E+00	5.25E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.29E-01	9.24E-02	1.56E+01	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Lead	6.26E-03	mg/L	5.97E+01	mg/kg	6.49E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	3.67E-01	4.37E-02	4.22E-02	4.22E-02	1.16E-02	1.16E-02	3.56E-04	0.00E+00	3.91E-02	2.19E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.43E-02	2.50E-03	7.82E-02	3.85E+00	2.03E-02	1.16E+01	6.77E-03
Manganese	2.12E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.50E+02	4.20E-01	NA	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	1.21E-02	0.00E+00	0.00E+00	4.15E-01	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.27E-01	9.77E+02	4.37E-04	9.77E+03	4.37E-05
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	4.57E-01	mg/kg	1.00E+00		1.14E+00	1.83E+00	NA	5.28E-01	5.28E-01	9.15E-02	9.15E-02	0.00E+00	0.00E+00	2.75E-04	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	7.93E-04	1.38E-04	1.21E-03	4.50E-01	2.68E-03	9.00E-01	1.34E-03
Mercury (methyl)	0.00E+00	mg/L	2.09E-01	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	7.56E-01	NA	NA			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	6.40E-03	0.00E+00	6.40E-02	0.00E+00
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA
Nickel	0.00E+00	mg/L	0.00E+00	mg/kg	8.33E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	NA	6.39E-02	6.39E-02	8.71E-02	8.71E-02	0.00E+00	0.00E+00	5.01E-03	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	1.38E-02	2.40E-03	2.12E-02	7.74E+00	2.74E-03	1.07E+02	1.98E-04
Nitrate	4.70E-01	mg/L	0.00E+00	mg/kg	9.11E-01	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	2.67E-02	0.00E+00	5.49E-04	1.11E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.91E-03	3.34E-04	1.14E+00	NA	NA	NA	NA
Nitrate/Nitrite	6.18E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02								3.51E-03	0.00E+00	0.00E+00	1.46E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.49E-01	NA	NA	NA	NA
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+02	0.00E+00	3.20E+02	0.00E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.06E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.45E-06	1.48E-06	1.02E-05	6.73E+00	1.52E-06	6.73E+01	1.52E-07
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E+00	0.00E+00	6.73E+01	0.00E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E+00	mg/kg	1.00E+00			3.00E-01	NA	8.18E+00	8.18E+00	1.11E-01	1.11E-01	0.00E+00	0.00E+00	1.27E-03	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	4.44E-03	7.76E-04	6.49E-03	6.50E+01	9.99E-05	1.30E+02	5.00E-05
Selenium	3.23E-03	mg/L	1.10E+00	mg/kg	1.98E+00	mg/kg	1.00E+00	2.05E+02	4.50E+00	7.72E-01	5.12E-01	5.42E-01	5.42E-01	1.51E-01	1.51E-01	1.83E-04	0.00E+00	1.19E-03	5.18E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.67E-03	9.90E-04	1.32E-02	4.40E-01	3.00E-02	1.50E+00	8.81E-03
Silver	0.00E+00	mg/L	2.05E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E+00	0.00E+00	5.44E+01	0.00E+00
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.46E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	1.48E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.17E-02	9.03E-03	7.55E-02	NA	NA	NA	NA
Sulfate	1.10E+01	mg/L	4.59E+00	mg/kg	1.16E+02	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	6.26E-01	0.00E+00	7.01E-02	2.59E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.45E-01	4.27E-02	2.69E+01	NA	NA	NA	NA
Thallium	1.00E-03	mg/L	6.22E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00							5.70E-05	0.00E+00	0.00E+00	5.88E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.45E-04	3.50E-01	1.84E-03	1.05E+00	6.14E-04
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.82E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.70E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.68E-06	8.17E-07	5.67E-06	2.14E+00	2.65E-06	1.07E+01	5.30E-07
Vanadium	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	0.00E+00	0.00E+00	1.43E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.48E-03	4.33E-04	1.73E-02	1.14E+01	1.51E-03	3.42E+01	5.04E-04
Zinc	6.50E-02	mg/L	7.78E+01	mg/kg	7.04E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	4.90E+00	7.15E-01	7.47E-01	7.47E-01	1.84E-01	1.84E-01	3.70E-03	0.00E+00	4.24E-02	1.48E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.46E-01	4.29E-02	1.82E+00	1.45E+01	1.25E-01	1.31E+02	1.39E-02

	EEQ N	EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	7.4E-05	1.5E-05
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	5.2E-02	5.2E-03
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	6.3E-03	7.0E-04
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	7.3E-02	2.4E-02
Aldrin/Dieldrin/Endrin EEQ:	9.9E-04	1.2E-04

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value
Terrestrial plant diet fraction =	0
Aquatic plant diet fraction =	0
Plant root diet fraction =	0
Fish diet fraction =	0.26
Aq. Invert diet fraction =	0
Terr. Invert diet fraction =	0
Mammal diet fraction =	0.63
Bird diet fraction =	0.11
Soil ingestion rate =	0.000678
Sediment ingestion rate =	0
Food ingestion rate =	0.0339
Body weight =	1.126
Home range =	1722
Water intake rate =	0.064
Site Area =	2330
Area Use Factor (AUF) =	1
Exposure Duration (ED) =	1

Table E-27
Tier 1 COPCs
EEQs and Hazard Indices for the Deer Mouse at LHAAP
Industrial Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							-----Unitless-----									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	1.22E-08	mg/L	8.87E-06	mg/kg	9.34E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	3.66E-09	0.00E+00	1.73E-08	0	0.00E+00	9.63E-06	0.00E+00	1.97E-09	0.00E+00	0.00E+00	0.00E+00	9.65E-06	1.00E-06	9.65E+00	1.00E-05	9.65E-01	21.54%	18.61%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.77E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.28E-06	0	0.00E+00	1.27E-03	0.00E+00	6.57E-06	0.00E+00	0.00E+00	0.00E+00	1.28E-03	8.00E-01	1.60E-03	4.00E+00	3.21E-04	0.00%	0.01%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.82E-02	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	3.38E-05	0	0.00E+00	1.32E-02	0.00E+00	5.23E-04	0.00E+00	0.00E+00	0.00E+00	1.37E-02	8.00E-01	1.72E-02	4.00E+00	3.43E-03	0.04%	0.07%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	6.08E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	0.00E+00	1.13E-05	0	0.00E+00	4.54E-03	0.00E+00	2.26E-05	0.00E+00	0.00E+00	0.00E+00	4.57E-03	8.00E-01	5.71E-03	4.00E+00	1.14E-03	0.01%	0.02%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.50E-03	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.79E-06	0	0.00E+00	1.12E-03	0.00E+00	4.72E-07	0.00E+00	0.00E+00	0.00E+00	1.12E-03	2.00E-01	5.61E-03	1.00E+00	1.12E-03	0.01%	0.02%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.08E-03	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.86E-06	0	0.00E+00	1.52E-03	0.00E+00	3.89E-06	0.00E+00	0.00E+00	0.00E+00	1.53E-03	4.58E+00	3.34E-04	9.16E+00	1.67E-04	0.00%	0.00%
Aluminum	6.11E+00	mg/L	9.69E+03	mg/kg	7.38E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	1.83E+00	0.00E+00	1.37E+01	0	0.00E+00	4.04E+01	0.00E+00	7.87E-01	0.00E+00	0.00E+00	0.00E+00	5.67E+01	1.93E+00	2.94E+01	1.93E+01	2.94E+00	65.60%	56.66%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E+00	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	4.68E-03	0	0.00E+00	1.33E-01	0.00E+00	8.20E-03	0.00E+00	0.00E+00	0.00E+00	1.46E-01	1.25E-01	1.17E+00	1.25E+00	1.17E-01	2.61%	2.26%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	6.94E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.29E-05	0	0.00E+00	5.09E-03	0.00E+00	5.25E-05	0.00E+00	0.00E+00	0.00E+00	5.16E-03	6.85E-02	7.53E-02	6.85E-01	7.53E-03	0.17%	0.15%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.45E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.69E-06	0	0.00E+00	1.06E-03	0.00E+00	6.80E-07	0.00E+00	0.00E+00	0.00E+00	1.07E-03	6.80E-02	1.57E-02	6.80E-01	1.57E-03	0.04%	0.03%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	5.66E-02	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	0.00E+00	1.05E-04	0	0.00E+00	4.25E-02	0.00E+00	2.32E-05	0.00E+00	0.00E+00	0.00E+00	4.27E-02	6.80E-02	6.27E-01	6.80E-01	6.27E-02	1.40%	1.21%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.69E-02	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	3.14E-05	0	0.00E+00	1.34E-02	0.00E+00	3.57E-06	0.00E+00	0.00E+00	0.00E+00	1.34E-02	6.80E-02	1.97E-01	6.80E-01	1.97E-02	0.44%	0.38%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.80E-01	0.00E+00	0.00%	0.00%
Barium	0.00E+00	mg/L	1.32E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E+00	0.00E+00	1.98E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	2.49E-03	mg/L	5.48E-01	mg/kg	4.03E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.52E+01	8.11E-01	9.31E-01	9.31E-01	9.22E-01	9.22E-01	7.46E-04	0.00E+00	7.48E-04	0	0.00E+00	4.72E-01	0.00E+00	1.74E-02	0.00E+00	0.00E+00	0.00E+00	4.91E-01	1.00E+00	4.91E-01	1.00E+01	4.91E-02	1.10%	0.95%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.84E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.41E-07	0	0.00E+00	1.34E-04	0.00E+00	3.44E-07	0.00E+00	0.00E+00	0.00E+00	1.35E-04	4.58E+00	2.95E-05	9.16E+00	1.48E-05	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.82E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	0.00E+00	0.00E+00	3.37E-02	0	0.00E+00	2.66E+00	0.00E+00	4.04E-01	0.00E+00	0.00E+00	0.00E+00	3.10E+00	3.28E+00	9.46E-01	1.31E+01	2.36E-01	2.11%	4.55%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.40E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	6.31E-07	0	0.00E+00	2.49E-04	0.00E+00	6.36E-07	0.00E+00	0.00E+00	0.00E+00	2.50E-04	4.58E+00	5.46E-05	9.16E+00	2.73E-05	0.00%	0.00%
Copper	1.18E-02	mg/L	7.20E+00	mg/kg	1.87E+01	mg/kg	1.00E+00	5.92E+03	5.25E+00	6.54E-01	5.86E-01	3.28E-01	3.28E-01	1.49E-01	1.49E-01	3.54E-03	0.00E+00	3.47E-02	0	0.00E+00	5.66E-01	0.00E+00	2.84E-01	0.00E+00	0.00E+00	0.00E+00	8.88E-01	1.17E+01	7.59E-02	1.51E+01	5.87E-02	0.17%	1.13%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.29E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	6.10E-07	0	0.00E+00	2.33E-04	0.00E+00	2.50E-05	0.00E+00	0.00E+00	0.00E+00	2.59E-04	2.00E-02	1.29E-02	2.00E-01	1.29E-03	0.03%	0.02%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.80E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	7.05E-07	0	0.00E+00	2.69E-04	0.00E+00	6.74E-07	0.00E+00	0.00E+00	0.00E+00	2.70E-04	9.20E-02	2.94E-03	9.20E-01	2.94E-04	0.01%	0.01%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	9.74E-03	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.81E-05	0	0.00E+00	7.11E-03	0.00E+00	1.82E-05	0.00E+00	0.00E+00	0.00E+00	7.15E-03	4.58E+00	1.56E-03	9.16E+00	7.81E-04	0.00%	0.02%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.11E-04	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.91E-07	0	0.00E+00	1.52E-04	0.00E+00	1.55E-07	0.00E+00	0.00E+00	0.00E+00	1.52E-04	1.00E-01	1.52E-03	1.00E+00	1.52E-04	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.77E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.28E-07	0	0.00E+00	1.27E-04	0.00E+00	1.55E-07	0.00E+00	0.00E+00	0.00E+00	1.28E-04	8.00E-02	1.60E-03	2.90E-01	4.41E-04	0.00%	0.01%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	5.98E+00	mg/L	0.00E+00	mg/kg	1.68E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	1.79E+00	0.00E+00	3.12E+01	0	0.00E+00	6.08E+01	0.00E+00	3.12E+00	0.00E+00	0.00E+00	0.00E+00	9.69E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	5.18E-03	mg/L	0.00E+00	mg/kg	7.30E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	3.59E-01	NA	4.00E-02	4.00E-02	1.33E-02	1.33E-02	1.55E-03	0.00E+00	1.35E-01	0	0.00E+00	1.21E+00	NA	1.36E-01	0.00E+00	0.00E+00	0.00E+00	1.49E+00	8.00E+00	1.86E-01	8.00E+01	1.86E-02	0.42%	0.36%
Manganese	4.54E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+03	2.10E+00	NA	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	1.36E-01	0.00E+00	0.00E+00	0	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E-01	8.80E+01	1.55E-03	2.84E+02	4.80E-04	0.00%	0.01%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	7.96E-01	mg/kg	1.00E+00		2.87E+00	1.26E+00	NA	4.09E-01	4.09E-01	1.03E-01	1.03E-01	0.00E+00	0.00E+00	1.48E-03	0	0.00E+00	4.65E-02	NA	1.51E-02	0.00E+00	0.00E+00	0.00E+00	6.30E-02	1.32E+01	4.78E-03	3.96E+01	1.59E-03	0.01%	0.03%
Mercury (methyl)	0.00E+00	mg/L	9.58E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.08E+00	NA	NA			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	3.20E-02	0.00E+00	1.60E-01	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	7.00E-01	0.00E+00	0.00%	0.00%
Nickel	0.00E+00	mg/L	9.33E+00	mg/kg	8.88E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	6.21E-02	6.29E-02	6.29E-02	1.01E-01	1.01E-01	0.00E+00	0.00E+00	1.65E-02	0	0.00E+00	1.95E+00	0.00E+00	2.59E-02	0.00E+00	0.00E+00	0.00E+00	1.99E+00	4.00E+01	4.97E-02	8.00E+01	2.49E-02	0.11%	0.48%
Nitrate	8.67E-01	mg/L	1.30E-01	mg/kg	1.12E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	2.60E-01	0.00E+00	2.07E-03	0	0.00E+00	5.90E-02	0.00E+00	1.81E-02	0.00E+00	0.00E+00	0.00E+00	3.39E-01	5.07E+02	6.69E-04	1.13E+03	3.00E-04	0.00%	0.00%
Nitrate/Nitrite	7.06E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03								2.12E-02	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.12E-02	5.07E+02	4.18E-05	1.13E+03	1.87E-05	0.00%	0.00%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	7.16E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.33E-06	0	0.00E+00	5.04E-04	0.00E+00	1.11E-06	0.00E+00	0.00E+00	0.00E+00	5.07E-04	2.40E-01	2.11E-03	2.40E+00	2.11E-04	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	3.62E+00	mg/kg	1.00E+00			1.14E+00	NA	6.57E+00	6.57E+00	1.66E-01	1.66E-01	0.00E+00	0.00E+00	6.71E-03	0	0.00E+00	1.91E-01	NA	1.10E+00	0.00E+00	0.00E+00	0.00E+00	1.30E+00	8.50E+00	1.53E-01	2.55E+01	5.09E-02	0.34%	0.98%
Selenium	0.00E+00	mg/L	8.67E-01	mg/kg	2.63E+00	mg/kg	1.00E+00	2.05E+02	4.50E+00	7.15E-01	4.99E-01	5.58E-01	5.58E-01	1.95E-01	1.95E-01	0.00E+00	0.00E+00	4.87E-03	0	0.00E+00	8.71E-02	0.00E+00	6.80E-02	0.00E+00	0.00E+00	0.00E+00	1.60E-01	2.00E-01	8.00E-01	3.30E-01	4.85E-01	1.79%	9.35%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.65E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	4.92E-02	0	0.00E+00	3.42E-01	0.00E+00	4.30E-01	0.00E+00	0.00E+00	0.00E+00	8.21E-01	2.63E+02	3.12E-03	7.89E+02	1.04E-03	0.01%	0.02%
Sulfate	6.09E+00	mg/L	2.00E+01	mg/kg	1.75E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	1.83E+00	0.00E+00	3.25E-01	0	0.00E+00	9.27E+00	0.00E+00	2.85E+00	0.00E+00	0.00E+00	0.00E+00	1.43E+01	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	7.12E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00							0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.40E-03	0.00E+00	7.40E-02	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.59E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	6.66E-07	0	0.00E+00	2.62E-04	0.00E+00	6.71E-07	0.00E+00	0.00E+00	0.00E+00	2.64E-04	4.58E+00	5.75E-05	9.16E+00	2.88E-05	0.00%	0.00%
Vanadium	3.33E-02	mg/L	0.00E+00	mg/kg	2.54E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	9.99E-03	0.00E+00	4.71E-02	0	0.00E+00	1.04E-01	0.00E+00	4.71E-03	0.00E+00	0.00E+00	0.00E+00	1.65E-01	2.10E-01	7.88E-01	2.10E+00	7.88E-02	1.76%	1.52%
Zinc	0.00E+00	mg/L	3.82E+01	mg/kg	7.62E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	4.65E+00	9.78E-01	7.21E-01	7.21E-01	4.51E-01	4.51E-01	0.00E+00	0.00E+00	1.41E-01	0	0.00E+00	1.64E+01	0.00E+00	2.55E+00	0.00E+00	0.00E+00	0.00E+00	1.91E+01	1.60E+02	1.19E-01	3.20E+02	5.97E-02	0.27%	1.15%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	3.6E-03	1.2E-03	0.01%	0.02%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	2.4E-02	4.9E-03	0.05%	0.09%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	9.2E-01	9.2E-02	2.04%	1.77%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	2.1E-02	2.7E-03	0.05%	0.05%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi \, x \, Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0.5	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0.5	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.0000408	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.00204	kg/d
Body weight =	0.022	kg
Home range =	0.0345946	acres
Water intake rate =	0.0066	L/d
Site Area =	2330	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-28
Tier 2 COPCs
EEQs and Hazard Indices for the Deer Mouse at LHAAP
Industrial Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
							-----Unitless-----								
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01
2,3,7,8-TCDD TEQ	1.07E-08	mg/L	5.59E-06	mg/kg	7.39E-06	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.51E-03	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E-02	mg/kg	1.00E+00		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	4.99E-03	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.38E-03	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.28E-03	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Aluminum	4.16E+00	mg/L	8.09E+03	mg/kg	7.05E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E+00	mg/kg	1.00E+00			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	5.90E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.27E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.34E-02	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.47E-02	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01
Cadmium	2.09E-03	mg/L	4.57E-01	mg/kg	3.79E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	2.60E+01	8.80E-01	9.58E-01	9.58E-01	6.72E-01	6.72E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.60E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.76E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Copper	9.31E-03	mg/L	6.17E+00	mg/kg	1.76E+01	mg/kg	1.00E+00	1.11E+03	1.56E+00	6.85E-01	6.44E-01	3.40E-01	3.40E-01	8.97E-02	8.97E-02
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.78E-04	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.31E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-03	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	1.86E-04	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.54E-04	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01
Iron	4.18E+00	mg/L	0.00E+00	mg/kg	1.59E+04	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E+01	1.39E+01	1.39E+01		
Lead	4.09E-03	mg/L	0.00E+00	mg/kg	6.49E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	3.67E-01	NA	4.22E-02	4.22E-02	1.16E-02	1.16E-02
Manganese	3.17E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.50E+02	4.20E-01	NA	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	4.57E-01	mg/kg	1.00E+00		1.14E+00	1.83E+00	NA	5.28E-01	5.28E-01	9.15E-02	9.15E-02
Mercury (methyl)	0.00E+00	mg/L	8.35E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	1.15E+00	NA	NA		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01
Nickel	0.00E+00	mg/L	8.12E+00	mg/kg	8.33E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	6.43E-02	6.39E-02	6.39E-02	8.71E-02	8.71E-02
Nitrate	4.79E-01	mg/L	9.50E-02	mg/kg	9.11E-01	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Nitrate/Nitrite	5.55E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E+00	mg/kg	1.00E+00			3.00E-01	NA	8.18E+00	8.18E+00	1.11E-01	1.11E-01
Selenium	0.00E+00	mg/L	7.51E-01	mg/kg	1.98E+00	mg/kg	1.00E+00	2.05E+02	4.50E+00	7.72E-01	4.92E-01	5.42E-01	5.42E-01	1.51E-01	1.51E-01
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.46E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Sulfate	5.14E+00	mg/L	1.39E+01	mg/kg	1.16E+02	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Thallium	0.00E+00	mg/L	6.14E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.82E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Vanadium	2.64E-02	mg/L	0.00E+00	mg/kg	2.38E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03
Zinc	0.00E+00	mg/L	3.22E+01	mg/kg	7.04E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	4.90E+00	1.05E+00	7.47E-01	7.47E-01	1.84E-01	1.84E-01

Chemical	EED Surface Water (mg/kg-d)	EED Sediment (mg/kg-d)	EED Soil (mg/kg-d)	EED Fish (mg/kg-d)	EED Aq. Invert. (mg/kg-d)	EED Terr. Invert. (mg/kg-d)	EED Aq. Plants (mg/kg-d)	EED Terr. Plants (mg/kg-d)	EED Plant Roots (mg/kg-d)	EED Mammals (mg/kg-d)	EED Birds (mg/kg-d)	Total EED (mg/kg-d)	NOAEL (mg/kg-d)	EEQ N	LOAEL (mg/kg-d)	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	3.20E-09	0.00E+00	1.37E-08	0	0.00E+00	3.77E-06	0.00E+00	1.33E-09	0.00E+00	0.00E+00	0.00E+00	3.79E-06	1.00E-06	3.79E+00	1.00E-05	3.79E-01	17.49%	14.45%
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	0.00E+00	2.79E-06	0	0.00E+00	6.25E-04	0.00E+00	1.95E-06	0.00E+00	0.00E+00	0.00E+00	6.30E-04	8.00E-01	7.87E-04	4.00E+00	1.57E-04	0.00%	0.01%
4,4'-DDE	0.00E+00	0.00E+00	2.65E-05	0	0.00E+00	5.96E-03	0.00E+00	9.01E-05	0.00E+00	0.00E+00	0.00E+00	6.08E-03	8.00E-01	7.59E-03	4.00E+00	1.52E-03	0.04%	0.06%
4,4'-DDT	0.00E+00	0.00E+00	9.25E-06	0	0.00E+00	2.15E-03	0.00E+00	6.48E-06	0.00E+00	0.00E+00	0.00E+00	2.16E-03	8.00E-01	2.70E-03	4.00E+00	5.40E-04	0.01%	0.02%
Aldrin	0.00E+00	0.00E+00	2.56E-06	0	0.00E+00	5.93E-04	0.00E+00	3.11E-07	0.00E+00	0.00E+00	0.00E+00	5.96E-04	2.00E-01	2.98E-03	1.00E+00	5.96E-04	0.01%	0.02%
alpha-Chlordane	0.00E+00	0.00E+00	2.38E-06	0	0.00E+00	5.41E-04	0.00E+00	5.55E-07	0.00E+00	0.00E+00	0.00E+00	5.44E-04	4.58E+00	1.19E-04	9.16E+00	5.94E-05	0.00%	0.00%
Aluminum	1.25E+00	0.00E+00	1.31E+01	0	0.00E+00	1.40E+01	0.00E+00	4.90E-01	0.00E+00	0.00E+00	0.00E+00	2.88E+01	1.93E+00	1.49E+01	1.93E+01	1.49E+00	68.98%	56.99%
Antimony	0.00E+00	0.00E+00	4.42E-03	0	0.00E+00	3.31E-02	0.00E+00	4.09E-03	0.00E+00	0.00E+00	0.00E+00	4.16E-02	1.25E-01	3.33E-01	1.25E+00	3.33E-02	1.54%	1.27%
Aroclor 1242	0.00E+00	0.00E+00	1.09E-05	0	0.00E+00	2.49E-03	0.00E+00	2.29E-06	0.00E+00	0.00E+00	0.00E+00	2.50E-03	6.85E-02	3.66E-02	6.85E-01	3.66E-03	0.17%	0.14%
Aroclor 1248	0.00E+00	0.00E+00	2.36E-06	0	0.00E+00	5.38E-04	0.00E+00	4.95E-07	0.00E+00	0.00E+00	0.00E+00	5.41E-04	6.80E-02	7.96E-03	6.80E-01	7.96E-04	0.04%	0.03%
Aroclor 1254	0.00E+00	0.00E+00	8.04E-05	0	0.00E+00	1.88E-02	0.00E+00	7.19E-06	0.00E+00	0.00E+00	0.00E+00	1.89E-02	6.80E-02	2.78E-01	6.80E-01	2.78E-02	1.28%	1.06%
Aroclor 1260	0.00E+00	0.00E+00	2.73E-05	0	0.00E+00	6.72E-03	0.00E+00	4.39E-07	0.00E+00	0.00E+00	0.00E+00	6.74E-03	6.80E-02	9.92E-02	6.80E-01	9.92E-03	0.46%	0.38%
Aroclor 1268	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.80E-01	0.00E+00	0.00%	0.00%
Barium	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E+00	0.00E+00	1.98E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	6.26E-04	0.00E+00	7.03E-04	0	0.00E+00	4.56E-01	0.00E+00	1.68E-02	0.00E+00	0.00E+00	0.00E+00	4.74E-01	1.00E+00	4.74E-01	1.00E+01	4.74E-02	2.19%	1.81%
Chlordane	0.00E+00	0.00E+00	2.96E-07	0	0.00E+00	6.72E-05	0.00E+00	6.90E-08	0.00E+00	0.00E+00	0.00E+00	6.76E-05	4.58E+00	1.48E-05	9.16E+00	7.38E-06	0.00%	0.00%
Chromium	0.00E+00	0.00E+00	3.21E-02	0	0.00E+00	2.46E-01	0.00E+00	3.29E-02	0.00E+00	0.00E+00	0.00E+00	3.11E-01	3.28E+00	9.48E-02	1.31E+01	2.37E-02	0.44%	0.90%
cis-Nonachlor	0.00E+00	0.00E+00	5.12E-07	0	0.00E+00	1.16E-04	0.00E+00	1.19E-07	0.00E+00	0.00E+00	0.00E+00	1.17E-04	4.58E+00	2.55E-05	9.16E+00	1.28E-05	0.00%	0.00%
Copper	2.79E-03	0.00E+00	3.26E-02	0	0.00E+00	5.58E-01	0.00E+00	2.77E-01	0.00E+00	0.00E+00	0.00E+00	8.70E-01	1.17E+01	7.44E-02	1.51E+01	5.75E-02	0.34%	2.19%
Dieldrin	0.00E+00	0.00E+00	5.16E-07	0	0.00E+00	1.14E-04	0.00E+00	3.10E-07	0.00E+00	0.00E+00	0.00E+00	1.14E-04	2.00E-02	5.72E-03	2.00E-01	5.72E-04	0.03%	0.02%
Endrin	0.00E+00	0.00E+00	6.15E-07	0	0.00E+00	1.35E-04	0.00E+00	4.21E-07	0.00E+00	0.00E+00	0.00E+00	1.36E-04	9.20E-02	1.48E-03	9.20E-01	1.48E-04	0.01%	0.01%
gamma-Chlordane	0.00E+00	0.00E+00	1.00E-05	0	0.00E+00	2.28E-03	0.00E+00	2.34E-06	0.00E+00	0.00E+00	0.00E+00	2.29E-03	4.58E+00	4.99E-04	9.16E+00	2.50E-04	0.00%	0.01%
Heptachlor	0.00E+00	0.00E+00	3.45E-07	0	0.00E+00	7.72E-05	0.00E+00	9.95E-08	0.00E+00	0.00E+00	0.00E+00	7.76E-05	1.00E-01	7.76E-04	1.00E+00	7.76E-05	0.00%	0.00%
Hexachlorobenzene	0.00E+00	0.00E+00	2.86E-07	0	0.00E+00	6.39E-05	0.00E+00	1.13E-07	0.00E+00	0.00E+00	0.00E+00	6.43E-05	8.00E-02	8.04E-04	2.90E-01	2.22E-04	0.00%	0.01%
HMX	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	1.25E+00	0.00E+00	2.94E+01	0	0.00E+00	2.65E+01	0.00E+00	2.94E+00	0.00E+00	0.00E+00	0.00E+00	6.01E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	1.23E-03	0.00E+00	1.20E-01	0	0.00E+00	1.10E+00	NA	1.27E-01	0.00E+00	0.00E+00	0.00E+00	1.35E+00	8.00E+00	1.69E-01	8.00E+01	1.69E-02	0.78%	0.64%
Manganese	9.50E-02	0.00E+00	0.00E+00	0	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.50E-02	8.80E+01	1.08E-03	2.84E+02	3.35E-04	0.00%	0.01%
Mercury (inorganic)	0.00E+00	0.00E+00	8.47E-04	0	0.00E+00	3.87E-02	NA	1.12E-02	0.00E+00	0.00E+00	0.00E+00	5.07E-02	1.32E+01	3.84E-03	3.96E+01	1.28E-03	0.02%	0.05%
Mercury (methyl)	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	3.20E-02	0.00E+00	1.60E-01	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	7.00E-01	0.00E+00	0.00%	0.00%
Nickel	0.00E+00	0.00E+00	1.54E-02	0	0.00E+00	4.09E-01	0.00E+00	2.47E-02	0.00E+00	0.00E+00	0.00E+00	4.49E-01	4.00E+01	1.12E-02	8.00E+01	5.61E-03	0.05%	0.21%
Nitrate	1.44E-01	0.00E+00	1.69E-03	0	0.00E+00	1.27E-02	0.00E+00	8.87E-03	0.00E+00	0.00E+00	0.00E+00	1.67E-01	5.07E+02	3.29E-04	1.13E+03	1.48E-04	0.00%	0.01%
Nitrate/Nitrite	1.67E-02	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.67E-02	5.07E+02	3.28E-05	1.13E+03	1.47E-05	0.00%	0.00%
Oxychlordane	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	0.00E+00	9.43E-07	0	0.00E+00	2.06E-04	0.00E+00	6.46E-07	0.00E+00	0.00E+00	0.00E+00	2.08E-04	2.40E-01	8.67E-04	2.40E+00	8.67E-05	0.00%	0.00%
Pentachlorophenol	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	0.00E+00	3.92E-03	0	0.00E+00	2.94E-02	NA	8.03E-01	0.00E+00	0.00E+00	0.00E+00	8.36E-01	8.50E+00	9.84E-02	2.55E+01	3.28E-02	0.45%	1.25%
Selenium	0.00E+00	0.00E+00	3.67E-03	0	0.00E+00	7.08E-02	0.00E+00	4.98E-02	0.00E+00	0.00E+00	0.00E+00	1.24E-01	2.00E-01	6.21E-01	3.30E-01	3.77E-01	2.87%	14.36%
Silver	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	0.00E+00	4.56E-02	0	0.00E+00	9.93E-02	0.00E+00	2.40E-01	0.00E+00	0.00E+00	0.00E+00	3.85E-01	2.63E+02	1.46E-03	7.89E+02	4.87E-04	0.01%	0.02%
Sulfate	1.54E+00	0.00E+00	2.16E-01	0	0.00E+00	1.62E+00	0.00E+00	1.13E+00	0.00E+00	0.00E+00	0.00E+00	4.51E+00	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.40E-03	0.00E+00	7.40E-02	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	0.00E+00	5.22E-07	0	0.00E+00	1.19E-04	0.00E+00	1.22E-07	0.00E+00	0.00E+00	0.00E+00	1.19E-04	4.58E+00	2.61E-05	9.16E+00	1.30E-05	0.00%	0.00%
Vanadium	7.92E-03	0.00E+00	4.42E-02	0	0.00E+00	4.64E-02	0.00E+00	3.98E-03	0.00E+00	0.00E+00	0.00E+00	1.02E-01	2.10E-01	4.88E-01	2.10E+00	4.88E-02	2.25%	1.86%
Zinc	0.00E+00	0.00E+00	1.31E-01	0	0.00E+00	1.60E+01	0.00E+00	2.44E+00	0.00E+00	0.00E+00	0.00E+00	1.86E+01	1.60E+02	1.16E-01	3.20E+02	5.80E-02	0.54%	2.21%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.5E-03	4.2E-04	0.01%	0.02%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	1.1E-02	2.2E-03	0.05%	0.08%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	4.2E-01	4.2E-02	1.94%	1.61%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	1.0E-02	1.3E-03	0.05%	0.05%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\,x\,Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0.5	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0.5	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.0000408	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.00204	kg/d
Body weight =	0.022	kg
Home range =	0.1457916	acres
Water intake rate =	0.0066	L/d
Site Area =	2330	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-29
Tier 1 COPCs
EEQs and Hazard Indices for the Raccoon at LHAAP
Industrial Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL		LOAEL		Percent Contribution to	Percent Contribution to
							--Unitless--									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	EEQ N	mg/kg-d	EEQ L	EEQ N	EEQ L
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	1.22E-08	mg/L	8.87E-06	mg/kg	9.34E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	1.00E-09	2.09E-08	2.20E-08	5.203E-06	1.46E-06	1.56E-06	0.00E+00	1.28E-09	0.00E+00	1.43E-09	0.00E+00	8.27E-06	1.00E-06	8.27E+00	1.00E-05	8.27E-01	3.93%	3.82%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.77E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.17E-06	0	0.00E+00	2.07E-04	0.00E+00	4.26E-06	0.00E+00	5.12E-06	0.00E+00	2.20E-04	8.00E-01	2.75E-04	4.00E+00	5.51E-05	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.82E-02	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	4.29E-05	0	0.00E+00	2.14E-03	0.00E+00	3.40E-04	0.00E+00	4.54E-05	0.00E+00	2.57E-03	8.00E-01	3.21E-03	4.00E+00	6.41E-04	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	6.08E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	0.00E+00	1.43E-05	0	0.00E+00	7.36E-04	0.00E+00	1.46E-05	0.00E+00	2.54E-05	0.00E+00	7.91E-04	8.00E-01	9.88E-04	4.00E+00	1.98E-04	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.50E-03	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.54E-06	0	0.00E+00	1.82E-04	0.00E+00	3.06E-07	0.00E+00	4.34E-06	0.00E+00	1.90E-04	2.00E-01	9.49E-04	1.00E+00	1.90E-04	0.00%	0.00%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.08E-03	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.90E-06	0	0.00E+00	2.47E-04	0.00E+00	2.52E-06	0.00E+00	6.01E-06	0.00E+00	2.60E-04	4.58E+00	5.68E-05	9.16E+00	2.84E-05	0.00%	0.00%
Aluminum	6.11E+00	mg/L	9.69E+03	mg/kg	7.38E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	5.03E-01	2.29E+01	1.74E+01	0.0659218	3.28E+02	6.56E+00	0.00E+00	5.11E-01	0.00E+00	1.60E-01	0.00E+00	3.76E+02	1.93E+00	1.95E+02	1.93E+01	1.95E+01	92.73%	90.13%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E+00	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	5.96E-03	0	0.00E+00	2.17E-02	0.00E+00	5.32E-03	0.00E+00	1.05E-03	0.00E+00	3.40E-02	1.25E-01	2.72E-01	1.25E+00	2.72E-02	0.13%	0.13%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	6.94E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.64E-05	0	0.00E+00	8.26E-04	0.00E+00	3.41E-05	0.00E+00	2.01E-05	0.00E+00	8.97E-04	6.85E-02	1.31E-02	6.85E-01	1.31E-03	0.01%	0.01%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.45E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.43E-06	0	0.00E+00	1.73E-04	0.00E+00	4.42E-07	0.00E+00	4.20E-06	0.00E+00	1.81E-04	6.80E-02	2.66E-03	6.90E-01	2.62E-04	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	5.66E-02	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	0.00E+00	1.33E-04	0	0.00E+00	6.90E-03	0.00E+00	1.51E-05	0.00E+00	1.51E-04	0.00E+00	7.20E-03	6.80E-02	1.06E-01	6.90E-01	1.04E-02	0.05%	0.05%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.69E-02	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	3.99E-05	0	0.00E+00	2.17E-03	0.00E+00	2.32E-06	0.00E+00	8.15E-05	0.00E+00	2.30E-03	6.80E-02	3.38E-02	6.90E-01	3.33E-03	0.02%	0.02%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.90E-01	0.00E+00	0.00%	0.00%
Barium	0.00E+00	mg/L	1.32E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	3.12E-01	0.00E+00	0	4.48E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.79E+00	5.10E+00	9.40E-01	1.98E+01	2.42E-01	0.45%	1.12%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	2.49E-03	mg/L	5.48E-01	mg/kg	4.03E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.52E+01	8.11E-01	9.31E-01	9.31E-01	9.22E-01	9.22E-01	2.05E-04	1.29E-03	9.51E-04	0.0101703	3.29E-02	7.66E-02	0.00E+00	1.13E-02	0.00E+00	9.33E-04	0.00E+00	1.34E-01	1.00E+00	1.34E-01	1.00E+01	1.34E-02	0.06%	0.06%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.84E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.34E-07	0	0.00E+00	2.18E-05	0.00E+00	2.23E-07	0.00E+00	5.32E-07	0.00E+00	2.30E-05	4.58E+00	5.02E-06	9.16E+00	2.51E-06	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.82E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	0.00E+00	0.00E+00	4.29E-02	0	0.00E+00	4.32E-01	0.00E+00	2.63E-01	0.00E+00	1.52E-02	0.00E+00	7.53E-01	3.28E+00	2.30E-01	1.31E+01	5.73E-02	0.11%	0.26%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.40E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	8.03E-07	0	0.00E+00	4.04E-05	0.00E+00	4.13E-07	0.00E+00	9.84E-07	0.00E+00	4.26E-05	4.58E+00	9.29E-06	9.16E+00	4.65E-06	0.00%	0.00%
Copper	1.18E-02	mg/L	7.20E+00	mg/kg	1.87E+01	mg/kg	1.00E+00	5.92E+03	5.25E+00	6.54E-01	5.86E-01	3.28E-01	3.28E-01	1.49E-01	1.49E-01	9.72E-04	1.70E-02	4.41E-02	0.175209	2.84E-01	9.19E-02	0.00E+00	1.84E-01	0.00E+00	7.00E-03	0.00E+00	8.05E-01	1.17E+01	6.88E-02	1.51E+01	5.32E-02	0.03%	0.25%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.29E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	7.76E-07	0	0.00E+00	3.78E-05	0.00E+00	1.62E-05	0.00E+00	9.51E-07	0.00E+00	5.58E-05	2.00E-02	2.79E-03	2.00E-01	2.79E-04	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.80E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	8.96E-07	0	0.00E+00	4.37E-05	0.00E+00	4.37E-07	0.00E+00	1.16E-06	0.00E+00	4.62E-05	9.20E-02	5.02E-04	9.20E-01	5.02E-05	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	9.74E-03	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.30E-05	0	0.00E+00	1.15E-03	0.00E+00	1.18E-05	0.00E+00	2.81E-05	0.00E+00	1.22E-03	4.58E+00	2.66E-04	9.16E+00	1.33E-04	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.11E-04	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.97E-07	0	0.00E+00	2.46E-05	0.00E+00	1.01E-07	0.00E+00	6.09E-07	0.00E+00	2.58E-05	1.00E-01	2.58E-04	1.00E+00	2.58E-05	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.77E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.18E-07	0	0.00E+00	2.07E-05	0.00E+00	1.01E-07	0.00E+00	5.12E-07	0.00E+00	2.17E-05	8.00E-02	2.71E-04	2.90E-01	7.49E-05	0.00%	0.00%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	5.98E+00	mg/L	0.00E+00	mg/kg	1.68E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	4.92E-01	0.00E+00	3.97E+01	14.993368	0.00E+00	9.87E+00	0.00E+00	2.03E+00	0.00E+00	8.73E-02	0.00E+00	6.71E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	1.44E-04	0.00E+00	0	1.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.02E-02	NA	NA	NA	NA	NA	NA
Lead	5.18E-03	mg/L	0.00E+00	mg/kg	7.30E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	3.59E-01	NA	4.00E-02	4.00E-02	1.33E-02	1.33E-02	4.27E-04	0.00E+00	1.72E-01	0.0194922	0.00E+00	1.97E-01	NA	8.80E-02	0.00E+00	2.44E-03	0.00E+00	4.80E-01	8.00E+00	6.00E-02	8.00E+01	6.00E-03	0.03%	0.03%
Manganese	4.54E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+03	2.10E+00	NA	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	3.74E-02	0.00E+00	0.00E+00	2.2798057	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.32E+00	8.80E+01	2.63E-02	2.84E+02	8.16E-03	0.01%	0.04%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	7.96E-01	mg/kg	1.00E+00		2.87E+00	1.26E+00	NA	4.09E-01	4.09E-01	1.03E-01	1.03E-01	0.00E+00	0.00E+00	1.88E-03	0	0.00E+00	7.55E-03	NA	9.79E-03	0.00E+00	2.06E-04	0.00E+00	1.94E-02	1.00E+00	1.94E-02	3.00E+00	6.47E-03	0.01%	0.03%
Mercury (methyl)	0.00E+00	mg/L	9.58E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.08E+00	NA	NA			0.00E+00	2.26E-04	0.00E+00	0	2.07E-03	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	2.29E-03	1.50E-02	1.53E-01	2.50E-02	9.17E-02	0.07%	0.42%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	7.00E-01	0.00E+00	0.00%	0.00%
Nickel	0.00E+00	mg/L	9.33E+00	mg/kg	8.88E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	6.21E-02	6.29E-02	6.29E-02	1.01E-01	1.01E-01	0.00E+00	2.20E-02	2.09E-02	0	1.63E-01	3.16E-01	0.00E+00	1.68E-02	0.00E+00	2.25E-03	0.00E+00	5.41E-01	4.00E+01	1.35E-02	8.00E+01	6.76E-03	0.01%	0.03%
Nitrate	8.67E-01	mg/L	1.30E-01	mg/kg	1.12E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	7.14E-02	3.06E-04	2.63E-03	2.3232753	2.05E-03	9.58E-03	0.00E+00	1.18E-02	0.00E+00	4.66E-04	0.00E+00	2.42E+00	5.07E+02	4.78E-03	1.13E+03	2.14E-03	0.00%	0.01%
Nitrate/Nitrite	7.06E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03								5.82E-03	0.00E+00	0.00E+00	0.1891617	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.95E-01	5.07E+02	3.85E-04	1.13E+03	1.73E-04	0.00%	0.00%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	7.16E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.69E-06	0	0.00E+00	8.19E-05	0.00E+00	7.22E-07	0.00E+00	2.07E-06	0.00E+00	8.63E-05	2.40E-01	3.60E-04	2.40E+00	3.60E-05	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	3.62E+00	mg/kg	1.00E+00			1.14E+00	NA	6.57E+00	6.57E+00	1.66E-01	1.66E-01	0.00E+00	0.00E+00	8.53E-03	0	0.00E+00	3.10E-02	NA	7.15E-01	0.00E+00	1.51E-03	0.00E+00	7.56E-01	8.50E+00	8.89E-02	2.55E+01	2.96E-02	0.04%	0.14%
Selenium	0.00E+00	mg/L	8.67E-01	mg/kg	2.63E+00	mg/kg	1.00E+00	2.05E+02	4.50E+00	7.15E-01	4.99E-01	5.58E-01	5.58E-01	1.95E-01	1.95E-01	0.00E+00	2.04E-03	6.20E-03	0	2.93E-02	1.41E-02	0.00E+00	4.42E-02	0.00E+00	1.29E-03	0.00E+00	9.72E-02	2.00E-01	4.86E-01	3.30E-01	2.94E-01	0.23%	1.36%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.65E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	6.25E-02	0	0.00E+00	5.55E-02	0.00E+00	2.79E-01	0.00E+00	1.11E-02	0.00E+00	4.08E-01	2.63E+02	1.55E-03	7.89E+02	5.18E-04	0.00%	0.00%
Sulfate	6.09E+00	mg/L	2.00E+01	mg/kg	1.75E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	5.02E-01	4.71E-02	4.14E-01	16.31886	3.15E-01	1.50E+00	0.00E+00	1.85E+00	0.00E+00	7.31E-02	0.00E+00	2.10E+01	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	7.12E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00							0.00E+00	1.68E-03	0.00E+00	0	2.41E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.58E-02	7.40E-03	3.48E+00	7.40E-02	3.48E-01	1.66%	1.61%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.59E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	8.46E-07	0	0.00E+00	4.26E-05	0.00E+00	4.36E-07	0.00E+00	1.04E-06	0.00E+00	4.49E-05	4.58E+00	9.80E-06	9.16E+00	4.90E-06	0.00%	0.00%
Vanadium	3.33E-02	mg/L	0.00E+00	mg/kg	2.54E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	2.74E-03	0.00E+00	5.99E-02	0.0892196	0.00E+00	1.68E-02	0.00E+00	3.06E-03	0.00E+00	3.77E-04	0.00E+00	1.72E-01	2.10E-01	8.19E-01	2.10E+00	8.19E-02	0.39%	0.38%
Zinc	0.00E+00	mg/L	3.82E+01	mg/kg	7.62E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	4.65E+00	9.78E-01	7.21E-01	7.21E-01	4.51E-01	4.51E-01	0.00E+00	9.00E-02	1.80E-01	0	2.16E+00	2.67E+00	0.00E+00	1.65E+00	0.00E+00	8.62E-02	0.00E+00	6.84E+00	1.60E+02	4.28E-02	3.20E+02	2.14E-02	0.02%	0.10%

	EEQ N	EEQ L	Percent EEQ N	Percent EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	6.0E-04	2.0E-04	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	4.5E-03	8.9E-04	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.6E-01	1.5E-02	0.07%	0.07%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	4.2E-03	5.2E-04	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0.6	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.05	unitless
Aq. Invert diet fraction =	0.15	unitless
Terr. Invert diet fraction =	0.15	unitless
Mammal diet fraction =	0.05	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.01363	kg/d
Sediment ingestion rate =	0.01363	kg/d
Food ingestion rate =	0.29	kg/d
Body weight =	5.78	kg
Home range =	13.09653	acres
Water intake rate =	0.476	L/d
Site Area =	2330	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-30
Tier 2 COPCs
EEQs and Hazard Indices for the Raccoon at LHAAP
Industrial Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							-----Unitless-----									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	1.07E-08	mg/L	5.59E-06	mg/kg	7.39E-06	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	8.79E-10	1.32E-08	1.74E-08	6.18E-07	1.96E-07	6.12E-07	0.00E+00	8.62E-10	0.00E+00	8.76E-10	0.00E+00	1.46E-06	1.00E-06	1.46E+00	1.00E-05	1.46E-01	0.87%	0.84%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.51E-03	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.55E-06	0	0.00E+00	1.01E-04	0.00E+00	1.27E-06	0.00E+00	3.31E-06	0.00E+00	1.10E-04	8.00E-01	1.37E-04	4.00E+00	2.74E-05	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E-02	mg/kg	1.00E+00		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	3.37E-05	0	0.00E+00	9.67E-04	0.00E+00	5.85E-05	0.00E+00	3.38E-05	0.00E+00	1.09E-03	8.00E-01	1.37E-03	4.00E+00	2.73E-04	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	4.99E-03	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	1.18E-05	0	0.00E+00	3.48E-04	0.00E+00	4.20E-06	0.00E+00	1.11E-05	0.00E+00	3.75E-04	8.00E-01	4.69E-04	4.00E+00	9.38E-05	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.38E-03	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.26E-06	0	0.00E+00	9.63E-05	0.00E+00	2.02E-07	0.00E+00	3.04E-06	0.00E+00	1.03E-04	2.00E-01	5.14E-04	1.00E+00	1.03E-04	0.00%	0.00%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.28E-03	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.03E-06	0	0.00E+00	8.78E-05	0.00E+00	3.60E-07	0.00E+00	2.82E-06	0.00E+00	9.40E-05	4.58E+00	2.05E-05	9.16E+00	1.03E-05	0.00%	0.00%
Aluminum	4.16E+00	mg/L	8.09E+03	mg/kg	7.05E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	3.42E-01	1.91E+01	1.66E+01	0.0448268	2.74E+02	2.28E+00	0.00E+00	3.18E-01	0.00E+00	1.17E-01	0.00E+00	3.13E+02	1.93E+00	1.62E+02	1.93E+01	1.62E+01	96.03%	93.71%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E+00	mg/kg	1.00E+00			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	5.62E-03	0	0.00E+00	5.38E-03	0.00E+00	2.65E-03	0.00E+00	6.62E-04	0.00E+00	1.43E-02	1.25E-01	1.15E-01	1.25E+00	1.15E-02	0.07%	0.07%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	5.90E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.39E-05	0	0.00E+00	4.04E-04	0.00E+00	1.49E-06	0.00E+00	1.30E-05	0.00E+00	4.33E-04	6.85E-02	6.32E-03	6.85E-01	6.32E-04	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.27E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.00E-06	0	0.00E+00	8.74E-05	0.00E+00	3.21E-07	0.00E+00	2.80E-06	0.00E+00	9.35E-05	6.80E-02	1.38E-03	6.90E-01	1.36E-04	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.34E-02	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	1.02E-04	0	0.00E+00	3.05E-03	0.00E+00	4.67E-06	0.00E+00	5.41E-05	0.00E+00	3.21E-03	6.80E-02	4.72E-02	6.90E-01	4.65E-03	0.03%	0.03%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.47E-02	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	3.47E-05	0	0.00E+00	1.09E-03	0.00E+00	2.85E-07	0.00E+00	6.17E-05	0.00E+00	1.19E-03	6.80E-02	1.75E-02	6.90E-01	1.72E-03	0.01%	0.01%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.90E-01	0.00E+00	0.00%	0.00%
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	2.78E-01	0.00E+00	0	4.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.28E+00	5.10E+00	8.39E-01	1.98E+01	2.16E-01	0.50%	1.25%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	2.09E-03	mg/L	4.57E-01	mg/kg	3.79E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	2.60E+01	8.80E-01	9.58E-01	9.58E-01	6.72E-01	6.72E-01	1.72E-04	1.08E-03	8.93E-04	0.0060047	2.06E-03	7.40E-02	0.00E+00	1.09E-02	0.00E+00	6.39E-04	0.00E+00	9.58E-02	1.00E+00	9.58E-02	1.00E+01	9.58E-03	0.06%	0.06%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.60E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.76E-07	0	0.00E+00	1.09E-05	0.00E+00	4.48E-08	0.00E+00	3.51E-07	0.00E+00	1.17E-05	4.58E+00	2.55E-06	9.16E+00	1.28E-06	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	0.00E+00	0.00E+00	4.08E-02	0	0.00E+00	3.99E-02	0.00E+00	2.14E-02	0.00E+00	3.68E-03	0.00E+00	1.06E-01	3.28E+00	3.23E-02	1.31E+01	8.05E-03	0.02%	0.05%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.76E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	6.51E-07	0	0.00E+00	1.89E-05	0.00E+00	7.75E-08	0.00E+00	6.07E-07	0.00E+00	2.02E-05	4.58E+00	4.41E-06	9.16E+00	2.21E-06	0.00%	0.00%
Copper	9.31E-03	mg/L	6.17E+00	mg/kg	1.76E+01	mg/kg	1.00E+00	1.11E+03	1.56E+00	6.85E-01	6.44E-01	3.40E-01	3.40E-01	8.97E-02	8.97E-02	7.67E-04	1.45E-02	4.14E-02	0.0259564	7.24E-02	9.06E-02	0.00E+00	1.80E-01	0.00E+00	3.95E-03	0.00E+00	4.29E-01	1.17E+01	3.67E-02	1.51E+01	2.84E-02	0.02%	0.16%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.78E-04	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	6.56E-07	0	0.00E+00	1.84E-05	0.00E+00	2.01E-07	0.00E+00	6.12E-07	0.00E+00	1.99E-05	2.00E-02	9.95E-04	2.00E-01	9.95E-05	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.31E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	7.82E-07	0	0.00E+00	2.20E-05	0.00E+00	2.73E-07	0.00E+00	1.01E-06	0.00E+00	2.40E-05	9.20E-02	2.61E-04	9.20E-01	2.61E-05	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-03	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.27E-05	0	0.00E+00	3.69E-04	0.00E+00	1.52E-06	0.00E+00	1.19E-05	0.00E+00	3.95E-04	4.58E+00	8.63E-05	9.16E+00	4.32E-05	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	1.86E-04	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.39E-07	0	0.00E+00	1.25E-05	0.00E+00	6.46E-08	0.00E+00	4.09E-07	0.00E+00	1.34E-05	1.00E-01	1.34E-04	1.00E+00	1.34E-05	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.54E-04	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.63E-07	0	0.00E+00	1.04E-05	0.00E+00	7.37E-08	0.00E+00	3.39E-07	0.00E+00	1.11E-05	8.00E-02	1.39E-04	2.90E-01	3.84E-05	0.00%	0.00%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	4.18E+00	mg/L	0.00E+00	mg/kg	1.59E+04	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	3.44E-01	0.00E+00	3.74E+01	2.6187527	0.00E+00	4.30E+00	0.00E+00	1.91E+00	0.00E+00	7.00E-02	0.00E+00	4.67E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	1.44E-04	0.00E+00	0	2.14E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.29E-03	NA	NA	NA	NA	NA	NA
Lead	4.09E-03	mg/L	0.00E+00	mg/kg	6.49E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	3.67E-01	NA	4.22E-02	4.22E-02	1.16E-02	1.16E-02	3.37E-04	0.00E+00	1.53E-01	0.0045967	0.00E+00	1.79E-01	NA	8.24E-02	0.00E+00	1.90E-03	0.00E+00	4.21E-01	8.00E+00	5.27E-02	8.00E+01	5.27E-03	0.03%	0.03%
Manganese	3.17E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.50E+02	4.20E-01	NA	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	2.61E-02	0.00E+00	0.00E+00	0.1986017	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.25E-01	8.80E+01	2.55E-03	2.84E+02	7.91E-04	0.00%	0.00%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	4.57E-01	mg/kg	1.00E+00		1.14E+00	1.83E+00	NA	5.28E-01	5.28E-01	9.15E-02	9.15E-02	0.00E+00	0.00E+00	1.08E-03	0	0.00E+00	6.28E-03	NA	7.25E-03	0.00E+00	1.05E-04	0.00E+00	1.47E-02	1.00E+00	1.47E-02	3.00E+00	4.91E-03	0.01%	0.03%
Mercury (methyl)	0.00E+00	mg/L	8.35E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	1.15E+00	NA	NA			0.00E+00	1.97E-04	0.00E+00	0	7.14E-04	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	9.10E-04	1.50E-02	6.07E-02	2.50E-02	3.64E-02	0.04%	0.21%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	7.00E-01	0.00E+00	0.00%	0.00%
Nickel	0.00E+00	mg/L	8.12E+00	mg/kg	8.33E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	6.43E-02	6.39E-02	6.39E-02	8.71E-02	8.71E-02	0.00E+00	1.92E-02	1.96E-02	0	2.97E-02	6.64E-02	0.00E+00	1.60E-02	0.00E+00	1.82E-03	0.00E+00	1.53E-01	4.00E+01	3.82E-03	8.00E+01	1.91E-03	0.00%	0.01%
Nitrate	4.79E-01	mg/L	9.50E-02	mg/kg	9.11E-01	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	3.94E-02	2.24E-04	2.15E-03	0.3614527	3.00E-04	2.06E-03	0.00E+00	5.76E-03	0.00E+00	2.53E-04	0.00E+00	4.12E-01	5.07E+02	8.12E-04	1.13E+03	3.64E-04	0.00%	0.00%
Nitrate/Nitrite	5.55E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02								4.57E-03	0.00E+00	0.00E+00	0.0418864	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.65E-02	5.07E+02	9.16E-05	1.13E+03	4.11E-05	0.00%	0.00%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.20E-06	0	0.00E+00	3.35E-05	0.00E+00	4.20E-07	0.00E+00	1.12E-06	0.00E+00	3.62E-05	2.40E-01	1.51E-04	2.40E+00	1.51E-05	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E+00	mg/kg	1.00E+00			3.00E-01	NA	8.18E+00	8.18E+00	1.11E-01	1.11E-01	0.00E+00	0.00E+00	4.99E-03	0	0.00E+00	4.78E-03	NA	5.21E-01	0.00E+00	5.88E-04	0.00E+00	5.32E-01	8.50E+00	6.25E-02	2.55E+01	2.08E-02	0.04%	0.12%
Selenium	0.00E+00	mg/L	7.51E-01	mg/kg	1.98E+00	mg/kg	1.00E+00	2.05E+02	4.50E+00	7.72E-01	4.92E-01	5.42E-01	5.42E-01	1.51E-01	1.51E-01	0.00E+00	1.77E-03	4.67E-03	0	2.54E-02	1.15E-02	0.00E+00	3.23E-02	0.00E+00	7.50E-04	0.00E+00	7.64E-02	2.00E-01	3.82E-01	3.30E-01	2.32E-01	0.23%	1.34%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.46E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	5.80E-02	0	0.00E+00	1.61E-02	0.00E+00	1.56E-01	0.00E+00	6.84E-03	0.00E+00	2.37E-01	2.63E+02	9.00E-04	7.89E+02	3.00E-04	0.00%	0.00%
Sulfate	5.14E+00	mg/L	1.39E+01	mg/kg	1.16E+02	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	4.23E-01	3.27E-02	2.75E-01	3.8754383	4.39E-02	2.63E-01	0.00E+00	7.36E-01	0.00E+00	3.24E-02	0.00E+00	5.68E+00	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	6.14E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00							0.00E+00	1.45E-03	0.00E+00	0	2.08E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.22E-02	7.40E-03	3.00E+00	7.40E-02	3.00E-01	1.78%	1.74%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.82E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	6.64E-07	0	0.00E+00	1.93E-05	0.00E+00	7.91E-08	0.00E+00	6.19E-07	0.00E+00	2.06E-05	4.58E+00	4.50E-06	9.16E+00	2.25E-06	0.00%	0.00%
Vanadium	2.64E-02	mg/L	0.00E+00	mg/kg	2.38E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	2.17E-03	0.00E+00	5.62E-02	0.0199161	0.00E+00	7.53E-03	0.00E+00	2.58E-03	0.00E+00	3.28E-04	0.00E+00	8.87E-02	2.10E-01	4.22E-01	2.10E+00	4.22E-02	0.25%	0.24%
Zinc	0.00E+00	mg/L	3.22E+01	mg/kg	7.04E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	4.90E+00	1.05E+00	7.47E-01	7.47E-01	1.84E-01	1.84E-01	0.00E+00	7.59E-02	1.66E-01	0	4.69E-01	2.60E+00	0.00E+00	1.58E+00	0.00E+00	3.25E-02	0.00E+00	4.92E+00	1.60E+02	3.08E-02	3.20E+02	1.54E-02	0.02%	0.09%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	2.5E-04	7.3E-05	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	2.0E-03	3.9E-04	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	7.2E-02	7.1E-03	0.04%	0.04%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	1.8E-03	2.3E-04	0.00%	0.00%

Intake Equation:

$$E_j = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text tables.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0.6	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.05	unitless
Aq. Invert diet fraction =	0.15	unitless
Terr. Invert diet fraction =	0.15	unitless
Mammal diet fraction =	0.05	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.01363	kg/d
Sediment ingestion rate =	0.01363	kg/d
Food ingestion rate =	0.29	kg/d
Body weight =	5.78	kg
Home range =	637.5293	acres
Water intake rate =	0.476	L/d
Site Area =	2330	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-31
Tier 1 COPCs
EEQs and Hazard Indices for the Raccoon-Louisiana Black Bear at LHAAP
Industrial Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							-----	-----	-----	-----	Unitless	-----	-----	-----	-----	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	1.22E-08	mg/L	8.87E-06	mg/kg	9.34E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	1.00E-09	3.67E-09	3.87E-09	3.068E-06	8.61E-07	9.21E-07	0.00E+00	7.54E-10	0.00E+00	8.41E-10	0.00E+00	4.86E-06	1.00E-06	4.86E+00	1.00E-05	4.86E-01	4.22%	4.10%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.77E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	7.33E-07	0	0.00E+00	1.22E-04	0.00E+00	2.51E-06	0.00E+00	3.02E-06	0.00E+00	1.28E-04	8.00E-01	1.60E-04	4.00E+00	3.21E-05	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.82E-02	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	7.54E-06	0	0.00E+00	1.26E-03	0.00E+00	2.00E-04	0.00E+00	2.68E-05	0.00E+00	1.49E-03	8.00E-01	1.87E-03	4.00E+00	3.74E-04	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	6.08E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	0.00E+00	2.52E-06	0	0.00E+00	4.34E-04	0.00E+00	8.63E-06	0.00E+00	1.49E-05	0.00E+00	4.60E-04	8.00E-01	5.75E-04	4.00E+00	1.15E-04	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.50E-03	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	6.22E-07	0	0.00E+00	1.07E-04	0.00E+00	1.81E-07	0.00E+00	2.56E-06	0.00E+00	1.10E-04	2.00E-01	5.52E-04	1.00E+00	1.10E-04	0.00%	0.00%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.08E-03	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	8.61E-07	0	0.00E+00	1.45E-04	0.00E+00	1.49E-06	0.00E+00	3.55E-06	0.00E+00	1.51E-04	4.58E+00	3.31E-05	9.16E+00	1.65E-05	0.00%	0.00%
Aluminum	6.11E+00	mg/L	9.69E+03	mg/kg	7.38E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	5.03E-01	4.02E+00	3.06E+00	0.0388711	1.94E+02	3.87E+00	0.00E+00	3.01E-01	0.00E+00	9.46E-02	0.00E+00	2.05E+02	1.93E+00	1.06E+02	1.93E+01	1.06E+01	92.45%	89.80%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E+00	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	1.05E-03	0	0.00E+00	1.28E-02	0.00E+00	3.14E-03	0.00E+00	6.21E-04	0.00E+00	1.76E-02	1.25E-01	1.41E-01	1.25E+00	1.41E-02	0.12%	0.12%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	6.94E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.88E-06	0	0.00E+00	4.87E-04	0.00E+00	2.01E-05	0.00E+00	1.18E-05	0.00E+00	5.22E-04	6.85E-02	7.62E-03	6.85E-01	7.62E-04	0.01%	0.01%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.45E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	6.02E-07	0	0.00E+00	1.02E-04	0.00E+00	2.61E-07	0.00E+00	2.48E-06	0.00E+00	1.05E-04	6.80E-02	1.55E-03	6.90E-01	1.53E-04	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	5.66E-02	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	0.00E+00	2.34E-05	0	0.00E+00	4.07E-03	0.00E+00	8.88E-06	0.00E+00	8.89E-05	0.00E+00	4.19E-03	6.80E-02	6.17E-02	6.90E-01	6.08E-03	0.05%	0.05%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.69E-02	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	7.01E-06	0	0.00E+00	1.28E-03	0.00E+00	1.37E-06	0.00E+00	4.81E-05	0.00E+00	1.34E-03	6.80E-02	1.97E-02	6.90E-01	1.94E-03	0.02%	0.02%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.90E-01	0.00E+00	0.00%	0.00%
Barium	0.00E+00	mg/L	1.32E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	5.48E-02	0.00E+00	0	2.64E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.70E+00	5.10E+00	5.29E-01	1.98E+01	1.36E-01	0.46%	1.15%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	2.49E-03	mg/L	5.48E-01	mg/kg	4.03E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.52E+01	8.11E-01	9.31E-01	9.31E-01	9.22E-01	9.22E-01	2.05E-04	2.27E-04	1.67E-04	0.005997	1.94E-02	4.52E-02	0.00E+00	6.66E-03	0.00E+00	5.50E-04	0.00E+00	7.84E-02	1.00E+00	7.84E-02	1.00E+01	7.84E-03	0.07%	0.07%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.84E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	7.62E-08	0	0.00E+00	1.29E-05	0.00E+00	1.32E-07	0.00E+00	3.14E-07	0.00E+00	1.34E-05	4.58E+00	2.92E-06	9.16E+00	1.46E-06	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.82E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	0.00E+00	0.00E+00	7.53E-03	0	0.00E+00	2.55E-01	0.00E+00	1.55E-01	0.00E+00	8.96E-03	0.00E+00	4.26E-01	3.28E+00	1.30E-01	1.31E+01	3.24E-02	0.11%	0.27%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.40E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.41E-07	0	0.00E+00	2.38E-05	0.00E+00	2.44E-07	0.00E+00	5.80E-07	0.00E+00	2.48E-05	4.58E+00	5.41E-06	9.16E+00	2.70E-06	0.00%	0.00%
Copper	1.18E-02	mg/L	7.20E+00	mg/kg	1.87E+01	mg/kg	1.00E+00	5.92E+03	5.25E+00	6.54E-01	5.86E-01	3.28E-01	3.28E-01	1.49E-01	1.49E-01	9.72E-04	2.98E-03	7.74E-03	0.1033129	1.68E-01	5.42E-02	0.00E+00	1.09E-01	0.00E+00	4.13E-03	0.00E+00	4.50E-01	1.17E+01	3.84E-02	1.51E+01	2.97E-02	0.03%	0.25%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.29E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.36E-07	0	0.00E+00	2.23E-05	0.00E+00	9.58E-06	0.00E+00	5.61E-07	0.00E+00	3.26E-05	2.00E-02	1.63E-03	2.00E-01	1.63E-04	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.80E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	1.57E-07	0	0.00E+00	2.58E-05	0.00E+00	2.58E-07	0.00E+00	6.84E-07	0.00E+00	2.69E-05	9.20E-02	2.92E-04	9.20E-01	2.92E-05	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	9.74E-03	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.03E-06	0	0.00E+00	6.81E-04	0.00E+00	6.97E-06	0.00E+00	1.66E-05	0.00E+00	7.09E-04	4.58E+00	1.55E-04	9.16E+00	7.73E-05	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.11E-04	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	8.73E-08	0	0.00E+00	1.45E-05	0.00E+00	5.94E-08	0.00E+00	3.59E-07	0.00E+00	1.50E-05	1.00E-01	1.50E-04	1.00E+00	1.50E-05	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.77E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	7.33E-08	0	0.00E+00	1.22E-05	0.00E+00	5.94E-08	0.00E+00	3.02E-07	0.00E+00	1.26E-05	8.00E-02	1.58E-04	2.90E-01	4.35E-05	0.00%	0.00%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	5.98E+00	mg/L	0.00E+00	mg/kg	1.68E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	4.92E-01	0.00E+00	6.97E+00	8.8409168	0.00E+00	5.82E+00	0.00E+00	1.19E+00	0.00E+00	5.15E-02	0.00E+00	2.34E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	2.53E-05	0.00E+00	0	5.92E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.95E-03	NA	NA	NA	NA	NA	NA
Lead	5.18E-03	mg/L	0.00E+00	mg/kg	7.30E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	3.59E-01	NA	4.00E-02	4.00E-02	1.33E-02	1.33E-02	4.27E-04	0.00E+00	3.03E-02	0.0114937	0.00E+00	1.16E-01	NA	5.19E-02	0.00E+00	1.44E-03	0.00E+00	2.12E-01	8.00E+00	2.65E-02	8.00E+01	2.65E-03	0.02%	0.02%
Manganese	4.54E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+03	2.10E+00	NA	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	3.74E-02	0.00E+00	0.00E+00	1.3442992	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.38E+00	8.80E+01	1.57E-02	2.84E+02	4.87E-03	0.01%	0.04%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	7.96E-01	mg/kg	1.00E+00		2.87E+00	1.26E+00	NA	4.09E-01	4.09E-01	1.03E-01	1.03E-01	0.00E+00	0.00E+00	3.30E-04	0	0.00E+00	4.45E-03	NA	5.77E-03	0.00E+00	1.21E-04	0.00E+00	1.07E-02	1.00E+00	1.07E-02	3.00E+00	3.56E-03	0.01%	0.03%
Mercury (methyl)	0.00E+00	mg/L	9.58E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.08E+00	NA	NA			0.00E+00	3.97E-05	0.00E+00	0	1.22E-03	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	1.26E-03	1.50E-02	8.39E-02	2.50E-02	5.03E-02	0.07%	0.42%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	7.00E-01	0.00E+00	0.00%	0.00%
Nickel	0.00E+00	mg/L	9.33E+00	mg/kg	8.88E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	6.21E-02	6.29E-02	6.29E-02	1.01E-01	1.01E-01	0.00E+00	3.86E-03	3.68E-03	0	9.60E-02	1.86E-01	0.00E+00	9.92E-03	0.00E+00	1.33E-03	0.00E+00	3.01E-01	4.00E+01	7.53E-03	8.00E+01	3.76E-03	0.01%	0.03%
Nitrate	8.67E-01	mg/L	1.30E-01	mg/kg	1.12E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	7.14E-02	5.37E-05	4.63E-04	1.3699313	1.21E-03	5.65E-03	0.00E+00	6.94E-03	0.00E+00	2.75E-04	0.00E+00	1.46E+00	5.07E+02	2.87E-03	1.13E+03	1.29E-03	0.00%	0.01%
Nitrate/Nitrite	7.06E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03								5.82E-03	0.00E+00	0.00E+00	0.1115402	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E-01	5.07E+02	2.31E-04	1.13E+03	1.04E-04	0.00%	0.00%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	7.16E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.97E-07	0	0.00E+00	4.83E-05	0.00E+00	4.26E-07	0.00E+00	1.22E-06	0.00E+00	5.02E-05	2.40E-01	2.09E-04	2.40E+00	2.09E-05	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	3.62E+00	mg/kg	1.00E+00			1.14E+00	NA	6.57E+00	6.57E+00	1.66E-01	1.66E-01	0.00E+00	0.00E+00	1.50E-03	0	0.00E+00	1.83E-02	NA	4.21E-01	0.00E+00	8.89E-04	0.00E+00	4.42E-01	8.50E+00	5.20E-02	2.55E+01	1.73E-02	0.05%	0.15%
Selenium	0.00E+00	mg/L	8.67E-01	mg/kg	2.63E+00	mg/kg	1.00E+00	2.05E+02	4.50E+00	7.15E-01	4.99E-01	5.58E-01	5.58E-01	1.95E-01	1.95E-01	0.00E+00	3.59E-04	1.09E-03	0	1.73E-02	8.34E-03	0.00E+00	2.60E-02	0.00E+00	7.58E-04	0.00E+00	5.39E-02	2.00E-01	2.69E-01	3.30E-01	1.63E-01	0.23%	1.38%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.65E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	1.10E-02	0	0.00E+00	3.27E-02	0.00E+00	1.65E-01	0.00E+00	6.52E-03	0.00E+00	2.15E-01	2.63E+02	8.17E-04	7.89E+02	2.72E-04	0.00%	0.00%
Sulfate	6.09E+00	mg/L	2.00E+01	mg/kg	1.75E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	5.02E-01	8.27E-03	7.27E-02	9.6225004	1.86E-01	8.87E-01	0.00E+00	1.09E+00	0.00E+00	4.31E-02	0.00E+00	1.24E+01	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	7.12E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00							0.00E+00	2.95E-04	0.00E+00	0	1.42E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.45E-02	7.40E-03	1.96E+00	7.40E-02	1.96E-01	1.70%	1.65%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.59E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.49E-07	0	0.00E+00	2.51E-05	0.00E+00	2.57E-07	0.00E+00	6.12E-07	0.00E+00	2.61E-05	4.58E+00	5.70E-06	9.16E+00	2.85E-06	0.00%	0.00%
Vanadium	3.33E-02	mg/L	0.00E+00	mg/kg	2.54E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	2.74E-03	0.00E+00	1.05E-02	0.0526088	0.00E+00	9.92E-03	0.00E+00	1.80E-03	0.00E+00	2.22E-04	0.00E+00	7.78E-02	2.10E-01	3.71E-01	2.10E+00	3.71E-02	0.32%	0.31%
Zinc	0.00E+00	mg/L	3.82E+01	mg/kg	7.62E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	4.65E+00	9.78E-01	7.21E-01	7.21E-01	4.51E-01	4.51E-01	0.00E+00	1.58E-02	3.16E-02	0	1.28E+00	1.57E+00	0.00E+00	9.76E-01	0.00E+00	5.08E-02	0.00E+00	3.92E+00	1.60E+02	2.45E-02	3.20E+02	1.23E-02	0.02%	0.10%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	3.5E-04	1.2E-04	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	2.6E-03	5.2E-04	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	9.0E-02	8.9E-03	0.08%	0.08%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	2.5E-03	3.0E-04	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\,x\,Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0.6	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.05	unitless
Aq. Invert diet fraction =	0.15	unitless
Terr. Invert diet fraction =	0.15	unitless
Mammal diet fraction =	0.05	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.002394	kg/d
Sediment ingestion rate =	0.002394	kg/d
Food ingestion rate =	0.171	kg/d
Body weight =	5.78	kg
Home range =	2011	acres
Water intake rate =	0.476	L/d
Site Area =	2330	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-32
Tier 2 COPCs
EEQs and Hazard Indices for the Raccoon-Louisiana Black Bear at LHAAP
Industrial Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
											------Unitless------					mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	1.07E-08	mg/L	5.59E-06	mg/kg	7.39E-06	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	8.79E-10	2.32E-09	3.06E-09	3.644E-07	1.16E-07	3.61E-07	0.00E+00	5.08E-10	0.00E+00	5.17E-10	0.00E+00	8.48E-07	1.00E-06	8.48E-01	1.00E-05	8.48E-02	0.93%	0.90%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.51E-03	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	6.24E-07	0	0.00E+00	5.98E-05	0.00E+00	7.48E-07	0.00E+00	1.95E-06	0.00E+00	6.31E-05	8.00E-01	7.89E-05	4.00E+00	1.58E-05	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E-02	mg/kg	1.00E+00		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	5.92E-06	0	0.00E+00	5.70E-04	0.00E+00	3.45E-05	0.00E+00	1.99E-05	0.00E+00	6.31E-04	8.00E-01	7.88E-04	4.00E+00	1.58E-04	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	4.99E-03	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	2.07E-06	0	0.00E+00	2.05E-04	0.00E+00	2.48E-06	0.00E+00	6.54E-06	0.00E+00	2.16E-04	8.00E-01	2.71E-04	4.00E+00	5.41E-05	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.38E-03	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	5.72E-07	0	0.00E+00	5.68E-05	0.00E+00	1.19E-07	0.00E+00	1.79E-06	0.00E+00	5.92E-05	2.00E-01	2.96E-04	1.00E+00	5.92E-05	0.00%	0.00%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.28E-03	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	5.32E-07	0	0.00E+00	5.18E-05	0.00E+00	2.12E-07	0.00E+00	1.66E-06	0.00E+00	5.42E-05	4.58E+00	1.18E-05	9.16E+00	5.91E-06	0.00%	0.00%
Aluminum	4.16E+00	mg/L	8.09E+03	mg/kg	7.05E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	3.42E-01	3.35E+00	2.92E+00	0.0264324	1.62E+02	1.34E+00	0.00E+00	1.88E-01	0.00E+00	6.90E-02	0.00E+00	1.70E+02	1.93E+00	8.80E+01	1.93E+01	8.80E+00	96.00%	93.64%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E+00	mg/kg	1.00E+00			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	9.87E-04	0	0.00E+00	3.17E-03	0.00E+00	1.56E-03	0.00E+00	3.90E-04	0.00E+00	6.11E-03	1.25E-01	4.89E-02	1.25E+00	4.89E-03	0.05%	0.05%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	5.90E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.44E-06	0	0.00E+00	2.38E-04	0.00E+00	8.77E-07	0.00E+00	7.64E-06	0.00E+00	2.49E-04	6.85E-02	3.64E-03	6.85E-01	3.64E-04	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.27E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	5.28E-07	0	0.00E+00	5.15E-05	0.00E+00	1.90E-07	0.00E+00	1.65E-06	0.00E+00	5.39E-05	6.80E-02	7.93E-04	6.90E-01	7.81E-05	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.34E-02	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	1.80E-05	0	0.00E+00	1.80E-03	0.00E+00	2.75E-06	0.00E+00	3.19E-05	0.00E+00	1.85E-03	6.80E-02	2.72E-02	6.90E-01	2.68E-03	0.03%	0.03%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.47E-02	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	6.10E-06	0	0.00E+00	6.43E-04	0.00E+00	1.68E-07	0.00E+00	3.64E-05	0.00E+00	6.85E-04	6.80E-02	1.01E-02	6.90E-01	9.93E-04	0.01%	0.01%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.90E-01	0.00E+00	0.00%	0.00%
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	4.89E-02	0.00E+00	0	2.36E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.41E+00	5.10E+00	4.72E-01	1.98E+01	1.22E-01	0.51%	1.29%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	2.09E-03	mg/L	4.57E-01	mg/kg	3.79E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	2.60E+01	8.80E-01	9.58E-01	9.58E-01	6.72E-01	6.72E-01	1.72E-04	1.89E-04	1.57E-04	0.0035407	1.22E-03	4.37E-02	0.00E+00	6.44E-03	0.00E+00	3.77E-04	0.00E+00	5.57E-02	1.00E+00	5.57E-02	1.00E+01	5.57E-03	0.06%	0.06%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.60E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	6.61E-08	0	0.00E+00	6.43E-06	0.00E+00	2.64E-08	0.00E+00	2.07E-07	0.00E+00	6.73E-06	4.58E+00	1.47E-06	9.16E+00	7.35E-07	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	0.00E+00	0.00E+00	7.17E-03	0	0.00E+00	2.35E-02	0.00E+00	1.26E-02	0.00E+00	2.17E-03	0.00E+00	4.55E-02	3.28E+00	1.39E-02	1.31E+01	3.46E-03	0.02%	0.04%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.76E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.14E-07	0	0.00E+00	1.11E-05	0.00E+00	4.57E-08	0.00E+00	3.58E-07	0.00E+00	1.16E-05	4.58E+00	2.54E-06	9.16E+00	1.27E-06	0.00%	0.00%
Copper	9.31E-03	mg/L	6.17E+00	mg/kg	1.76E+01	mg/kg	1.00E+00	1.11E+03	1.56E+00	6.85E-01	6.44E-01	3.40E-01	3.40E-01	8.97E-02	8.97E-02	7.67E-04	2.55E-03	7.27E-03	0.0153053	4.27E-02	5.34E-02	0.00E+00	1.06E-01	0.00E+00	2.33E-03	0.00E+00	2.30E-01	1.17E+01	1.97E-02	1.51E+01	1.52E-02	0.02%	0.16%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.78E-04	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.15E-07	0	0.00E+00	1.09E-05	0.00E+00	1.19E-07	0.00E+00	3.61E-07	0.00E+00	1.15E-05	2.00E-02	5.73E-04	2.00E-01	5.73E-05	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.31E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	1.37E-07	0	0.00E+00	1.29E-05	0.00E+00	1.61E-07	0.00E+00	5.95E-07	0.00E+00	1.38E-05	9.20E-02	1.50E-04	9.20E-01	1.50E-05	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-03	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.24E-06	0	0.00E+00	2.18E-04	0.00E+00	8.94E-07	0.00E+00	7.00E-06	0.00E+00	2.28E-04	4.58E+00	4.98E-05	9.16E+00	2.49E-05	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	1.86E-04	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	7.70E-08	0	0.00E+00	7.39E-06	0.00E+00	3.81E-08	0.00E+00	2.41E-07	0.00E+00	7.74E-06	1.00E-01	7.74E-05	1.00E+00	7.74E-06	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.54E-04	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	6.38E-08	0	0.00E+00	6.12E-06	0.00E+00	4.34E-08	0.00E+00	2.00E-07	0.00E+00	6.42E-06	8.00E-02	8.03E-05	2.90E-01	2.21E-05	0.00%	0.00%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	4.18E+00	mg/L	0.00E+00	mg/kg	1.59E+04	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	3.44E-01	0.00E+00	6.57E+00	1.5441611	0.00E+00	2.53E+00	0.00E+00	1.13E+00	0.00E+00	4.13E-02	0.00E+00	1.22E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	2.53E-05	0.00E+00	0	1.26E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.29E-03	NA	NA	NA	NA	NA	NA
Lead	4.09E-03	mg/L	0.00E+00	mg/kg	6.49E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	3.67E-01	NA	4.22E-02	4.22E-02	1.16E-02	1.16E-02	3.37E-04	0.00E+00	2.69E-02	0.0027104	0.00E+00	1.06E-01	NA	4.86E-02	0.00E+00	1.12E-03	0.00E+00	1.85E-01	8.00E+00	2.32E-02	8.00E+01	2.32E-03	0.03%	0.02%
Manganese	3.17E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.50E+02	4.20E-01	NA	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	2.61E-02	0.00E+00	0.00E+00	0.1171065	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.43E-01	8.80E+01	1.63E-03	2.84E+02	5.04E-04	0.00%	0.01%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	4.57E-01	mg/kg	1.00E+00		1.14E+00	1.83E+00	NA	5.28E-01	5.28E-01	9.15E-02	9.15E-02	0.00E+00	0.00E+00	1.89E-04	0	0.00E+00	3.70E-03	NA	4.28E-03	0.00E+00	6.18E-05	0.00E+00	8.23E-03	1.00E+00	8.23E-03	3.00E+00	2.74E-03	0.01%	0.03%
Mercury (methyl)	0.00E+00	mg/L	8.35E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	1.15E+00	NA	NA			0.00E+00	3.46E-05	0.00E+00	0	4.21E-04	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	4.55E-04	1.50E-02	3.04E-02	2.50E-02	1.82E-02	0.03%	0.19%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	7.00E-01	0.00E+00	0.00%	0.00%
Nickel	0.00E+00	mg/L	8.12E+00	mg/kg	8.33E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	6.43E-02	6.39E-02	6.39E-02	8.71E-02	8.71E-02	0.00E+00	3.36E-03	3.45E-03	0	1.75E-02	3.91E-02	0.00E+00	9.45E-03	0.00E+00	1.07E-03	0.00E+00	7.40E-02	4.00E+01	1.85E-03	8.00E+01	9.25E-04	0.00%	0.01%
Nitrate	4.79E-01	mg/L	9.50E-02	mg/kg	9.11E-01	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	3.94E-02	3.93E-05	3.78E-04	0.2131325	1.77E-04	1.21E-03	0.00E+00	3.40E-03	0.00E+00	1.49E-04	0.00E+00	2.58E-01	5.07E+02	5.09E-04	1.13E+03	2.28E-04	0.00%	0.00%
Nitrate/Nitrite	5.55E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02								4.57E-03	0.00E+00	0.00E+00	0.0246986	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.93E-02	5.07E+02	5.77E-05	1.13E+03	2.59E-05	0.00%	0.00%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.11E-07	0	0.00E+00	1.98E-05	0.00E+00	2.47E-07	0.00E+00	6.59E-07	0.00E+00	2.09E-05	2.40E-01	8.70E-05	2.40E+00	8.70E-06	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E+00	mg/kg	1.00E+00			3.00E-01	NA	8.18E+00	8.18E+00	1.11E-01	1.11E-01	0.00E+00	0.00E+00	8.76E-04	0	0.00E+00	2.82E-03	NA	3.07E-01	0.00E+00	3.47E-04	0.00E+00	3.11E-01	8.50E+00	3.66E-02	2.55E+01	1.22E-02	0.04%	0.13%
Selenium	0.00E+00	mg/L	7.51E-01	mg/kg	1.98E+00	mg/kg	1.00E+00	2.05E+02	4.50E+00	7.72E-01	4.92E-01	5.42E-01	5.42E-01	1.51E-01	1.51E-01	0.00E+00	3.11E-04	8.20E-04	0	1.50E-02	6.78E-03	0.00E+00	1.91E-02	0.00E+00	4.42E-04	0.00E+00	4.24E-02	2.00E-01	2.12E-01	3.30E-01	1.28E-01	0.23%	1.37%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.46E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	1.02E-02	0	0.00E+00	9.50E-03	0.00E+00	9.17E-02	0.00E+00	4.03E-03	0.00E+00	1.15E-01	2.63E+02	4.39E-04	7.89E+02	1.46E-04	0.00%	0.00%
Sulfate	5.14E+00	mg/L	1.39E+01	mg/kg	1.16E+02	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	4.23E-01	5.75E-03	4.82E-02	2.2851722	2.59E-02	1.55E-01	0.00E+00	4.34E-01	0.00E+00	1.91E-02	0.00E+00	3.40E+00	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	6.14E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00							0.00E+00	2.54E-04	0.00E+00	0	1.23E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-02	7.40E-03	1.69E+00	7.40E-02	1.69E-01	1.84%	1.80%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.82E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.17E-07	0	0.00E+00	1.14E-05	0.00E+00	4.66E-08	0.00E+00	3.65E-07	0.00E+00	1.19E-05	4.58E+00	2.60E-06	9.16E+00	1.30E-06	0.00%	0.00%
Vanadium	2.64E-02	mg/L	0.00E+00	mg/kg	2.38E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	2.17E-03	0.00E+00	9.87E-03	0.0117436	0.00E+00	4.44E-03	0.00E+00	1.52E-03	0.00E+00	1.93E-04	0.00E+00	2.99E-02	2.10E-01	1.43E-01	2.10E+00	1.43E-02	0.16%	0.15%
Zinc	0.00E+00	mg/L	3.22E+01	mg/kg	7.04E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	4.90E+00	1.05E+00	7.47E-01	7.47E-01	1.84E-01	1.84E-01	0.00E+00	1.33E-02	2.92E-02	0	2.77E-01	1.53E+00	0.00E+00	9.33E-01	0.00E+00	1.92E-02	0.00E+00	2.80E+00	1.60E+02	1.75E-02	3.20E+02	8.76E-03	0.02%	0.09%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.5E-04	4.2E-05	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	1.1E-03	2.3E-04	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	4.2E-02	4.1E-03	0.05%	0.04%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	1.0E-03	1.3E-04	0.00%	0.00%

Intake Equation:

$$E_j = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\,x\,Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this media.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0.6	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.05	unitless
Aq. Invert diet fraction =	0.15	unitless
Terr. Invert diet fraction =	0.15	unitless
Mammal diet fraction =	0.05	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.002394	kg/d
Sediment ingestion rate =	0.002394	kg/d
Food ingestion rate =	0.171	kg/d
Body weight =	5.78	kg
Home range =	2011	acres
Water intake rate =	0.476	L/d
Site Area =	2330	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-33
Tier 1 COPCs
EEQs and Hazard Indices for the Short-tailed Shrew at LHAAP
Industrial Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Total Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
							---Unitless---								
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00
2,3,7,8-TCDD TEQ	1.22E-08	mg/L	8.87E-06	mg/kg	7.62E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.88E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.72E-02	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	6.89E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.82E-03	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.60E-03	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Aluminum	6.11E+00	mg/L	9.69E+03	mg/kg	9.54E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.10E+00	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	7.40E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.32E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	5.39E-02	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.93E-02	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00
Barium	0.00E+00	mg/L	1.32E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00
Cadmium	2.49E-03	mg/L	5.48E-01	mg/kg	8.87E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	1.77E+01	8.11E-01	6.53E-01	6.53E-01	9.22E-01	9.22E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.83E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.88E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.91E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Copper	1.18E-02	mg/L	7.20E+00	mg/kg	1.76E+01	mg/kg	1.00E+00	5.92E+03	5.25E+00	6.83E-01	5.86E-01	3.39E-01	3.39E-01	1.49E-01	1.49E-01
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.70E-03	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	4.03E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	5.38E-03	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	1.87E-04	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E-02	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00
Iron	5.98E+00	mg/L	0.00E+00	mg/kg	1.74E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01		
Lead	5.18E-03	mg/L	0.00E+00	mg/kg	4.75E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	3.89E-01	NA	4.84E-02	4.84E-02	1.33E-02	1.33E-02
Manganese	4.54E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+03	2.10E+00	NA	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.89E-01	mg/kg	1.00E+00		2.87E+00	1.54E+00	NA	4.69E-01	4.69E-01	1.03E-01	1.03E-01
Mercury (methyl)	0.00E+00	mg/L	9.58E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.08E+00	NA	NA		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00
Nickel	0.00E+00	mg/L	9.33E+00	mg/kg	1.07E+01	mg/kg	1.00E+00		2.32E+00	4.73E+00	6.21E-02	6.00E-02	6.00E-02	1.01E-01	1.01E-01
Nitrate	8.67E-01	mg/L	1.30E-01	mg/kg	1.86E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Nitrate/Nitrite	7.06E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	8.77E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	3.79E+00	mg/kg	1.00E+00			1.14E+00	NA	6.44E+00	6.44E+00	1.66E-01	1.66E-01
Selenium	0.00E+00	mg/L	8.67E-01	mg/kg	1.50E+00	mg/kg	1.00E+00	2.05E+02	4.50E+00	8.32E-01	4.99E-01	5.28E-01	5.28E-01	1.95E-01	1.95E-01
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	5.39E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Sulfate	6.09E+00	mg/L	2.00E+01	mg/kg	1.35E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Thallium	0.00E+00	mg/L	7.12E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	4.15E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Vanadium	3.33E-02	mg/L	0.00E+00	mg/kg	2.60E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03
Zinc	0.00E+00	mg/L	3.82E+01	mg/kg	6.16E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.36E+00	9.78E-01	7.92E-01	7.92E-01	4.51E-01	4.51E-01

Chemical	EED Surface Water (mg/kg-d)	EED Sediment (mg/kg-d)	EED Soil (mg/kg-d)	EED Fish (mg/kg-d)	EED Aq. Invert. (mg/kg-d)	EED Terr. Invert. (mg/kg-d)	EED Aq. Plants (mg/kg-d)	EED Terr. Plants (mg/kg-d)	EED Plant Roots (mg/kg-d)	EED Mammals (mg/kg-d)	EED Birds (mg/kg-d)	Total EED (mg/kg-d)	NOAEL (mg/kg-d)	EEQ N	LOAEL (mg/kg-d)	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	2.68E-09	0.00E+00	1.06E-07	0	0.00E+00	1.82E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E-05	1.00E-06	1.83E+01	1.00E-05	1.83E+00	11.15%	10.50%
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	0.00E+00	2.62E-05	0	0.00E+00	3.13E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.15E-03	8.00E-01	3.94E-03	4.00E+00	7.89E-04	0.00%	0.00%
4,4'-DDE	0.00E+00	0.00E+00	2.41E-04	0	0.00E+00	2.89E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.91E-02	8.00E-01	3.64E-02	4.00E+00	7.28E-03	0.02%	0.04%
4,4'-DDT	0.00E+00	0.00E+00	9.63E-05	0	0.00E+00	1.19E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E-02	8.00E-01	1.50E-02	4.00E+00	3.00E-03	0.01%	0.02%
Aldrin	0.00E+00	0.00E+00	3.94E-05	0	0.00E+00	4.87E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.91E-03	2.00E-01	2.45E-02	1.00E+00	4.91E-03	0.01%	0.03%
alpha-Chlordane	0.00E+00	0.00E+00	3.64E-05	0	0.00E+00	4.41E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.45E-03	4.58E+00	9.71E-04	9.16E+00	4.85E-04	0.00%	0.00%
Aluminum	1.34E+00	0.00E+00	1.33E+02	0	0.00E+00	1.21E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.55E+02	1.93E+00	1.32E+02	1.93E+01	1.32E+01	80.69%	75.96%
Antimony	0.00E+00	0.00E+00	2.94E-02	0	0.00E+00	2.58E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.87E-01	1.25E-01	2.30E+00	1.25E+00	2.30E-01	1.40%	1.32%
Aroclor 1242	0.00E+00	0.00E+00	1.03E-04	0	0.00E+00	1.26E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E-02	6.85E-02	1.85E-01	6.85E-01	1.85E-02	0.11%	0.11%
Aroclor 1248	0.00E+00	0.00E+00	1.84E-05	0	0.00E+00	2.24E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.26E-03	6.80E-02	3.32E-02	6.80E-01	3.32E-03	0.02%	0.02%
Aroclor 1254	0.00E+00	0.00E+00	7.52E-04	0	0.00E+00	9.38E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.46E-02	6.80E-02	1.39E+00	6.80E-01	1.39E-01	0.85%	0.80%
Aroclor 1260	0.00E+00	0.00E+00	2.69E-04	0	0.00E+00	3.53E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.55E-02	6.80E-02	5.23E-01	6.80E-01	5.23E-02	0.32%	0.30%
Aroclor 1268	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.80E-01	0.00E+00	0.00%	0.00%
Barium	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E+00	0.00E+00	1.98E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	5.47E-04	0.00E+00	1.24E-02	0	0.00E+00	1.69E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.70E+00	1.00E+00	1.70E+00	1.00E+01	1.70E-01	1.04%	0.98%
Chlordane	0.00E+00	0.00E+00	2.55E-06	0	0.00E+00	3.09E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.12E-04	4.58E+00	6.80E-05	9.16E+00	3.40E-05	0.00%	0.00%
Chromium	0.00E+00	0.00E+00	2.62E-01	0	0.00E+00	6.37E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.63E+00	3.28E+00	2.02E+00	1.31E+01	5.05E-01	1.23%	2.90%
cis-Nonachlor	0.00E+00	0.00E+00	5.46E-06	0	0.00E+00	6.62E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.67E-04	4.58E+00	1.46E-04	9.16E+00	7.28E-05	0.00%	0.00%
Copper	2.60E-03	0.00E+00	2.46E-01	0	0.00E+00	1.29E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.54E+00	1.17E+01	1.32E-01	1.51E+01	1.02E-01	0.08%	0.58%
Dieldrin	0.00E+00	0.00E+00	2.38E-05	0	0.00E+00	2.80E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.82E-03	2.00E-02	1.41E-01	2.00E-01	1.41E-02	0.09%	0.08%
Endrin	0.00E+00	0.00E+00	5.63E-06	0	0.00E+00	6.61E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.67E-04	9.20E-02	7.25E-03	9.20E-01	7.25E-04	0.00%	0.00%
gamma-Chlordane	0.00E+00	0.00E+00	7.51E-05	0	0.00E+00	9.10E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.18E-03	4.58E+00	2.00E-03	9.16E+00	1.00E-03	0.00%	0.01%
Heptachlor	0.00E+00	0.00E+00	2.61E-06	0	0.00E+00	3.11E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.14E-04	1.00E-01	3.14E-03	1.00E+00	3.14E-04	0.00%	0.00%
Hexachlorobenzene	0.00E+00	0.00E+00	2.39E-04	0	0.00E+00	2.86E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.88E-02	8.00E-02	3.60E-01	2.90E-01	9.93E-02	0.22%	0.57%
HMX	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	1.31E+00	0.00E+00	2.43E+02	0	0.00E+00	1.46E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.90E+02	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	1.14E-03	0.00E+00	6.63E-01	0	0.00E+00	1.98E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.65E+00	8.00E+00	3.31E-01	8.00E+01	3.31E-02	0.20%	0.19%
Manganese	1.00E-01	0.00E+00	0.00E+00	0	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	8.80E+01	1.14E-03	2.84E+02	3.52E-04	0.00%	0.00%
Mercury (inorganic)	0.00E+00	0.00E+00	8.22E-03	0	0.00E+00	9.75E-02	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.06E-01	1.32E+01	8.01E-03	3.96E+01	2.67E-03	0.00%	0.02%
Mercury (methyl)	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	3.20E-02	0.00E+00	1.60E-01	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	7.00E-01	0.00E+00	0.00%	0.00%
Nickel	0.00E+00	0.00E+00	1.50E-01	0	0.00E+00	5.45E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.60E+00	4.00E+01	1.40E-01	8.00E+01	7.00E-02	0.09%	0.40%
Nitrate	1.91E-01	0.00E+00	2.59E-02	0	0.00E+00	2.27E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.44E-01	5.07E+02	8.76E-04	1.13E+03	3.93E-04	0.00%	0.00%
Nitrate/Nitrite	1.55E-02	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.55E-02	5.07E+02	3.06E-05	1.13E+03	1.37E-05	0.00%	0.00%
Oxychlordane	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	0.00E+00	1.22E-05	0	0.00E+00	1.43E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.44E-03	2.40E-01	6.01E-03	2.40E+00	6.01E-04	0.00%	0.00%
Pentachlorophenol	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	0.00E+00	5.29E-02	0	0.00E+00	4.64E-01	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.16E-01	8.50E+00	6.08E-02	2.55E+01	2.03E-02	0.04%	0.12%
Selenium	0.00E+00	0.00E+00	2.09E-02	0	0.00E+00	1.34E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.55E-01	2.00E-01	7.74E-01	3.30E-01	4.69E-01	0.47%	2.69%
Silver	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	0.00E+00	7.53E-01	0	0.00E+00	1.61E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.36E+00	2.63E+02	8.98E-03	7.89E+02	2.99E-03	0.01%	0.02%
Sulfate	1.34E+00	0.00E+00	1.88E+00	0	0.00E+00	1.65E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.97E+01	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.40E-03	0.00E+00	7.40E-02	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	0.00E+00	5.80E-06	0	0.00E+00	7.03E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.09E-04	4.58E+00	1.55E-04	9.16E+00	7.74E-05	0.00%	0.00%
Vanadium	7.33E-03	0.00E+00	3.63E-01	0	0.00E+00	2.46E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.16E-01	2.10E-01	2.93E+00	2.10E+00	2.93E-01	1.79%	1.68%
Zinc	0.00E+00	0.00E+00	8.60E-01	0	0.00E+00	3.55E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.63E+01	1.60E+02	2.27E-01	3.20E+02	1.14E-01	0.14%	0.65%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	6.5E-03	2.0E-03	0.00%	0.01%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	5.5E-02	1.1E-02	0.03%	0.06%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	2.1E+00	2.1E-01	1.30%	1.22%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	1.7E-01	2.0E-02	0.11%	0.11%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\,x\,Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	1	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.000209	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.001611	kg/d
Body weight =	0.015	kg
Home range =	0.074131	acres
Water intake rate =	0.0033	L/d
Site Area =	2330	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-34
Tier 2 COPCs
EEQs and Hazard Indices for the Short-tailed Shrew at LHAAP
Industrial Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Total Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL		LOAEL		Percent Contribution to	Percent Contribution to
									----------Unitless----------							mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	EEQ N	mg/kg-d	EEQ L	EEQ N	EEQ L
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	1.07E-08	mg/L	5.59E-06	mg/kg	5.82E-06	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	2.35E-09	0.00E+00	8.12E-08	0	0.00E+00	6.88E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.96E-06	1.00E-06	6.96E+00	1.00E-05	6.96E-01	6.87%	6.50%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.64E-03	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.29E-05	0	0.00E+00	1.58E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.60E-03	8.00E-01	2.00E-03	4.00E+00	4.00E-04	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.20E-02	mg/kg	1.00E+00		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	1.67E-04	0	0.00E+00	1.16E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E-02	8.00E-01	1.47E-02	4.00E+00	2.94E-03	0.01%	0.03%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	5.57E-03	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	7.77E-05	0	0.00E+00	5.55E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.62E-03	8.00E-01	7.03E-03	4.00E+00	1.41E-03	0.01%	0.01%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-03	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.45E-05	0	0.00E+00	1.75E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.77E-03	2.00E-01	8.87E-03	1.00E+00	1.77E-03	0.01%	0.02%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.34E-03	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.87E-05	0	0.00E+00	1.31E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E-03	4.58E+00	2.90E-04	9.16E+00	1.45E-04	0.00%	0.00%
Aluminum	4.16E+00	mg/L	8.09E+03	mg/kg	8.99E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	9.14E-01	0.00E+00	1.26E+02	0	0.00E+00	4.15E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.68E+02	1.93E+00	8.70E+01	1.93E+01	8.70E+00	85.90%	81.22%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.05E+00	mg/kg	1.00E+00			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	2.86E-02	0	0.00E+00	6.61E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.47E-02	1.25E-01	7.58E-01	1.25E+00	7.58E-02	0.75%	0.71%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	6.31E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	8.81E-05	0	0.00E+00	6.18E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.27E-03	6.85E-02	9.15E-02	6.85E-01	9.15E-03	0.09%	0.09%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.11E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.54E-05	0	0.00E+00	1.08E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E-03	6.80E-02	1.61E-02	6.80E-01	1.61E-03	0.02%	0.02%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	3.78E-02	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	5.28E-04	0	0.00E+00	3.80E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.85E-02	6.80E-02	5.66E-01	6.80E-01	5.66E-02	0.56%	0.53%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.70E-02	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	2.38E-04	0	0.00E+00	1.80E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.82E-02	6.80E-02	2.68E-01	6.80E-01	2.68E-02	0.26%	0.25%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.80E-01	0.00E+00	0.00%	0.00%
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E+00	0.00E+00	1.98E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	2.09E-03	mg/L	4.57E-01	mg/kg	7.47E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	1.91E+01	8.80E-01	7.06E-01	7.06E-01	6.72E-01	6.72E-01	4.59E-04	0.00E+00	1.04E-02	0	0.00E+00	1.53E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.55E+00	1.00E+00	1.55E+00	1.00E+01	1.55E-01	1.53%	1.44%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.60E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.23E-06	0	0.00E+00	1.56E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.58E-04	4.58E+00	3.45E-05	9.16E+00	1.72E-05	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	0.00E+00	0.00E+00	2.46E-01	0	0.00E+00	5.80E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.26E-01	3.28E+00	2.52E-01	1.31E+01	6.29E-02	0.25%	0.59%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.70E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.77E-06	0	0.00E+00	2.63E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.67E-04	4.58E+00	5.83E-05	9.16E+00	2.92E-05	0.00%	0.00%
Copper	9.31E-03	mg/L	6.17E+00	mg/kg	1.33E+01	mg/kg	1.00E+00	1.11E+03	1.56E+00	8.47E-01	6.44E-01	4.03E-01	4.03E-01	8.97E-02	8.97E-02	2.05E-03	0.00E+00	1.86E-01	0	0.00E+00	1.21E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.40E+00	1.17E+01	1.19E-01	1.51E+01	9.22E-02	0.12%	0.86%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.51E-03	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.11E-05	0	0.00E+00	1.43E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.45E-03	2.00E-02	7.26E-02	2.00E-01	7.26E-03	0.07%	0.07%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.95E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	4.12E-06	0	0.00E+00	2.79E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.83E-04	9.20E-02	3.07E-03	9.20E-01	3.07E-04	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.61E-03	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	5.03E-05	0	0.00E+00	3.52E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.57E-03	4.58E+00	7.79E-04	9.16E+00	3.90E-04	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	1.65E-04	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.30E-06	0	0.00E+00	1.58E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.60E-04	1.00E-01	1.60E-03	1.00E+00	1.60E-04	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.48E-02	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.06E-04	0	0.00E+00	1.42E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.44E-02	8.00E-02	1.80E-01	2.90E-01	4.97E-02	0.18%	0.46%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	4.18E+00	mg/L	0.00E+00	mg/kg	1.64E+04	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	9.19E-01	0.00E+00	2.29E+02	0	0.00E+00	6.35E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.94E+02	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	4.09E-03	mg/L	0.00E+00	mg/kg	3.99E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	4.02E-01	NA	5.22E-02	5.22E-02	1.16E-02	1.16E-02	9.00E-04	0.00E+00	5.57E-01	0	0.00E+00	1.73E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.28E+00	8.00E+00	2.85E-01	8.00E+01	2.85E-02	0.28%	0.27%
Manganese	3.17E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.50E+02	4.20E-01	NA	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	6.97E-02	0.00E+00	0.00E+00	0	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.97E-02	8.80E+01	7.92E-04	2.84E+02	2.45E-04	0.00%	0.00%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	2.65E-01	mg/kg	1.00E+00		1.14E+00	2.63E+00	NA	6.77E-01	6.77E-01	9.15E-02	9.15E-02	0.00E+00	0.00E+00	3.70E-03	0	0.00E+00	7.49E-02	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.86E-02	1.32E+01	5.96E-03	3.96E+01	1.99E-03	0.01%	0.02%
Mercury (methyl)	0.00E+00	mg/L	8.35E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	1.15E+00	NA	NA			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	3.20E-02	0.00E+00	1.60E-01	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	7.00E-01	0.00E+00	0.00%	0.00%
Nickel	0.00E+00	mg/L	8.12E+00	mg/kg	9.95E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	6.43E-02	6.11E-02	6.11E-02	8.71E-02	8.71E-02	0.00E+00	0.00E+00	1.39E-01	0	0.00E+00	1.13E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E+00	4.00E+01	3.18E-02	8.00E+01	1.59E-02	0.03%	0.15%
Nitrate	4.79E-01	mg/L	9.50E-02	mg/kg	1.21E+00	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	1.05E-01	0.00E+00	1.68E-02	0	0.00E+00	3.89E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.61E-01	5.07E+02	3.18E-04	1.13E+03	1.43E-04	0.00%	0.00%
Nitrate/Nitrite	5.55E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02								1.22E-02	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.22E-02	5.07E+02	2.41E-05	1.13E+03	1.08E-05	0.00%	0.00%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.07E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	7.08E-06	0	0.00E+00	4.76E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.84E-04	2.40E-01	2.01E-03	2.40E+00	2.01E-04	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.93E+00	mg/kg	1.00E+00			3.00E-01	NA	7.16E+00	7.16E+00	1.11E-01	1.11E-01	0.00E+00	0.00E+00	4.09E-02	0	0.00E+00	9.43E-02	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.35E-01	8.50E+00	1.59E-02	2.55E+01	5.30E-03	0.02%	0.05%
Selenium	0.00E+00	mg/L	7.51E-01	mg/kg	1.17E+00	mg/kg	1.00E+00	2.05E+02	4.50E+00	8.89E-01	4.92E-01	5.15E-01	5.15E-01	1.51E-01	1.51E-01	0.00E+00	0.00E+00	1.64E-02	0	0.00E+00	1.12E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E-01	2.00E-01	6.41E-01	3.30E-01	3.89E-01	0.63%	3.63%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	3.84E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	5.36E-01	0	0.00E+00	3.59E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.95E-01	2.63E+02	3.40E-03	7.89E+02	1.13E-03	0.00%	0.01%
Sulfate	5.14E+00	mg/L	1.39E+01	mg/kg	9.41E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	1.13E+00	0.00E+00	1.31E+00	0	0.00E+00	3.03E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.47E+00	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	6.14E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00							0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.40E-03	0.00E+00	7.40E-02	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.72E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.79E-06	0	0.00E+00	2.65E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.69E-04	4.58E+00	5.87E-05	9.16E+00	2.93E-05	0.00%	0.00%
Vanadium	2.64E-02	mg/L	0.00E+00	mg/kg	2.48E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	5.81E-03	0.00E+00	3.47E-01	0	0.00E+00	1.12E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.65E-01	2.10E-01	2.21E+00	2.10E+00	2.21E-01	2.18%	2.06%
Zinc	0.00E+00	mg/L	3.22E+01	mg/kg	5.34E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	5.90E+00	1.05E+00	8.44E-01	8.44E-01	1.84E-01	1.84E-01	0.00E+00	0.00E+00	7.45E-01	0	0.00E+00	3.38E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.46E+01	1.60E+02	2.16E-01	3.20E+02	1.08E-01	0.21%	1.01%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	2.8E-03	7.7E-04	0.00%	0.01%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	2.4E-02	4.7E-03	0.02%	0.04%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	9.4E-01	9.4E-02	0.93%	0.88%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	8.5E-02	9.3E-03	0.08%	0.09%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	1	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.000209	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.001611	kg/d
Body weight =	0.015	kg
Home range =	0.963707	acres
Water intake rate =	0.0033	L/d
Site Area =	2330	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-35
Tier 1 COPCs
EEQs and Hazard Indices for the Red Fox at LHAAP
Industrial Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Total Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
								--------------------	Unitless	--------------------					
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00
2,3,7,8-TCDD TEQ	1.22E-08	mg/L	8.87E-06	mg/kg	7.62E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.88E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.72E-02	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	6.89E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.82E-03	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.60E-03	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Aluminum	6.11E+00	mg/L	9.69E+03	mg/kg	9.54E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E+00	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	7.40E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.32E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	5.39E-02	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.93E-02	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00
Barium	0.00E+00	mg/L	1.32E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00
Cadmium	2.49E-03	mg/L	5.48E-01	mg/kg	8.87E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	1.77E+01	8.11E-01	6.53E-01	6.53E-01	9.22E-01	9.22E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.83E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.88E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.91E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Copper	1.18E-02	mg/L	7.20E+00	mg/kg	1.76E+01	mg/kg	1.00E+00	5.92E+03	5.25E+00	6.83E-01	5.86E-01	3.39E-01	3.39E-01	1.49E-01	1.49E-01
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.70E-03	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	4.03E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	5.38E-03	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	1.87E-04	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E-02	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00
Iron	5.98E+00	mg/L	0.00E+00	mg/kg	1.74E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01		
Lead	5.18E-03	mg/L	0.00E+00	mg/kg	4.75E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	3.89E-01	NA	4.84E-02	4.84E-02	1.33E-02	1.33E-02
Manganese	4.54E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+03	2.10E+00	NA	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.89E-01	mg/kg	1.00E+00		2.87E+00	1.54E+00	NA	4.69E-01	4.69E-01	1.03E-01	1.03E-01
Mercury (methyl)	0.00E+00	mg/L	9.58E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.08E+00	NA	NA		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00
Nickel	0.00E+00	mg/L	9.33E+00	mg/kg	1.07E+01	mg/kg	1.00E+00		2.32E+00	4.73E+00	6.21E-02	6.00E-02	6.00E-02	1.01E-01	1.01E-01
Nitrate	8.67E-01	mg/L	1.30E-01	mg/kg	1.86E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Nitrate/Nitrite	7.06E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	8.77E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	3.79E+00	mg/kg	1.00E+00			1.14E+00	NA	6.44E+00	6.44E+00	1.66E-01	1.66E-01
Selenium	0.00E+00	mg/L	8.67E-01	mg/kg	1.50E+00	mg/kg	1.00E+00	2.05E+02	4.50E+00	8.32E-01	4.99E-01	5.28E-01	5.28E-01	1.95E-01	1.95E-01
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	5.39E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Sulfate	6.09E+00	mg/L	2.00E+01	mg/kg	1.35E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Thallium	0.00E+00	mg/L	7.12E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	4.15E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Vanadium	3.33E-02	mg/L	0.00E+00	mg/kg	2.60E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03
Zinc	0.00E+00	mg/L	3.82E+01	mg/kg	6.16E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.36E+00	9.78E-01	7.92E-01	7.92E-01	4.51E-01	4.51E-01

Chemical	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL		LOAEL		Percent Contribution to	Percent Contribution to
	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	EEQ N	mg/kg-d	EEQ L	EEQ N	EEQ L
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	1.03E-09	0.00E+00	7.21E-09	0	0.00E+00	1.72E-07	0.00E+00	1.40E-10	0.00E+00	1.10E-08	2.35E-09	1.93E-07	1.00E-06	1.93E-01	1.00E-05	1.93E-02	2.52%	2.32%
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	0.00E+00	1.78E-06	0	0.00E+00	2.95E-05	0.00E+00	6.08E-07	0.00E+00	5.11E-05	1.10E-05	9.40E-05	8.00E-01	1.17E-04	4.00E+00	2.35E-05	0.00%	0.00%
4,4'-DDE	0.00E+00	0.00E+00	1.63E-05	0	0.00E+00	2.72E-04	0.00E+00	4.33E-05	0.00E+00	4.05E-04	8.68E-05	8.24E-04	8.00E-01	1.03E-03	4.00E+00	2.06E-04	0.01%	0.02%
4,4'-DDT	0.00E+00	0.00E+00	6.53E-06	0	0.00E+00	1.12E-04	0.00E+00	2.24E-06	0.00E+00	2.71E-04	5.81E-05	4.50E-04	8.00E-01	5.63E-04	4.00E+00	1.13E-04	0.01%	0.01%
Aldrin	0.00E+00	0.00E+00	2.67E-06	0	0.00E+00	4.59E-05	0.00E+00	7.75E-08	0.00E+00	7.68E-05	1.65E-05	1.42E-04	2.00E-01	7.10E-04	1.00E+00	1.42E-04	0.01%	0.02%
alpha-Chlordane	0.00E+00	0.00E+00	2.47E-06	0	0.00E+00	4.16E-05	0.00E+00	4.26E-07	0.00E+00	7.10E-05	1.52E-05	1.31E-04	4.58E+00	2.85E-05	9.16E+00	1.43E-05	0.00%	0.00%
Aluminum	5.16E-01	0.00E+00	9.03E+00	0	0.00E+00	1.14E+00	0.00E+00	8.89E-02	0.00E+00	1.95E+00	4.18E-01	1.32E+01	1.93E+00	6.81E+00	1.93E+01	6.81E-01	88.97%	81.67%
Antimony	0.00E+00	0.00E+00	2.39E-03	0	0.00E+00	2.92E-03	0.00E+00	7.17E-04	0.00E+00	9.92E-03	2.13E-03	1.81E-02	1.25E-01	1.45E-01	1.25E+00	1.45E-02	1.89%	1.73%
Aroclor 1242	0.00E+00	0.00E+00	7.00E-06	0	0.00E+00	1.18E-04	0.00E+00	4.89E-06	0.00E+00	2.01E-04	4.32E-05	3.75E-04	6.85E-02	5.47E-03	6.85E-01	5.47E-04	0.07%	0.07%
Aroclor 1248	0.00E+00	0.00E+00	1.25E-06	0	0.00E+00	2.12E-05	0.00E+00	5.41E-08	0.00E+00	3.60E-05	7.71E-06	6.61E-05	6.80E-02	9.73E-04	6.90E-01	9.59E-05	0.01%	0.01%
Aroclor 1254	0.00E+00	0.00E+00	5.11E-05	0	0.00E+00	8.85E-04	0.00E+00	1.93E-06	0.00E+00	1.35E-03	2.90E-04	2.58E-03	6.80E-02	3.80E-02	6.90E-01	3.74E-03	0.50%	0.45%
Aroclor 1260	0.00E+00	0.00E+00	1.82E-05	0	0.00E+00	3.33E-04	0.00E+00	3.55E-07	0.00E+00	8.74E-04	1.87E-04	1.41E-03	6.80E-02	2.08E-02	6.90E-01	2.05E-03	0.27%	0.25%
Aroclor 1268	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.90E-01	0.00E+00	0.00%	0.00%
Barium	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E+00	0.00E+00	1.98E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	2.10E-04	0.00E+00	8.40E-04	0	0.00E+00	1.59E-02	0.00E+00	2.35E-03	0.00E+00	1.94E-02	4.15E-03	4.28E-02	1.00E+00	4.28E-02	1.00E+01	4.28E-03	0.56%	0.51%
Chlordane	0.00E+00	0.00E+00	1.73E-07	0	0.00E+00	2.92E-06	0.00E+00	2.98E-08	0.00E+00	4.97E-06	1.07E-06	9.16E-06	4.58E+00	2.00E-06	9.16E+00	1.00E-06	0.00%	0.00%
Chromium	0.00E+00	0.00E+00	1.78E-02	0	0.00E+00	6.01E-02	0.00E+00	3.65E-02	0.00E+00	1.48E-01	3.17E-02	2.94E-01	3.28E+00	8.96E-02	1.31E+01	2.24E-02	1.17%	2.68%
cis-Nonachlor	0.00E+00	0.00E+00	3.70E-07	0	0.00E+00	6.24E-06	0.00E+00	6.39E-08	0.00E+00	1.07E-05	2.28E-06	1.96E-05	4.58E+00	4.28E-06	9.16E+00	2.14E-06	0.00%	0.00%
Copper	9.97E-04	0.00E+00	1.67E-02	0	0.00E+00	1.22E-02	0.00E+00	2.43E-02	0.00E+00	6.23E-02	1.33E-02	1.30E-01	1.17E+01	1.11E-02	1.51E+01	8.57E-03	0.14%	1.03%
Dieldrin	0.00E+00	0.00E+00	1.61E-06	0	0.00E+00	2.64E-05	0.00E+00	1.13E-05	0.00E+00	4.64E-05	9.95E-06	9.57E-05	2.00E-02	4.79E-03	2.00E-01	4.79E-04	0.06%	0.06%
Endrin	0.00E+00	0.00E+00	3.82E-07	0	0.00E+00	6.24E-06	0.00E+00	6.25E-08	0.00E+00	1.16E-05	2.49E-06	2.08E-05	9.20E-02	2.26E-04	9.20E-01	2.26E-05	0.00%	0.00%
gamma-Chlordane	0.00E+00	0.00E+00	5.09E-06	0	0.00E+00	8.59E-05	0.00E+00	8.79E-07	0.00E+00	1.47E-04	3.14E-05	2.70E-04	4.58E+00	5.89E-05	9.16E+00	2.94E-05	0.00%	0.00%
Heptachlor	0.00E+00	0.00E+00	1.77E-07	0	0.00E+00	2.93E-06	0.00E+00	1.20E-08	0.00E+00	5.09E-06	1.09E-06	9.30E-06	1.00E-01	9.30E-05	1.00E+00	9.30E-06	0.00%	0.00%
Hexachlorobenzene	0.00E+00	0.00E+00	1.62E-05	0	0.00E+00	2.70E-04	0.00E+00	1.31E-06	0.00E+00	4.67E-04	1.00E-04	8.54E-04	8.00E-02	1.07E-02	2.90E-01	2.95E-03	0.14%	0.35%
HMX	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	5.05E-01	0.00E+00	1.65E+01	0	0.00E+00	1.37E+00	0.00E+00	2.82E-01	0.00E+00	8.50E-01	1.82E-01	1.97E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	4.37E-04	0.00E+00	4.50E-02	0	0.00E+00	1.87E-02	NA	9.31E-03	0.00E+00	1.49E-02	3.20E-03	9.16E-02	8.00E+00	1.14E-02	8.00E+01	1.14E-03	0.15%	0.14%
Manganese	3.84E-02	0.00E+00	0.00E+00	0	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.84E-02	8.80E+01	4.36E-04	2.84E+02	1.35E-04	0.01%	0.02%
Mercury (inorganic)	0.00E+00	0.00E+00	5.58E-04	0	0.00E+00	9.20E-04	NA	1.12E-03	0.00E+00	1.43E-03	3.07E-04	4.34E-03	1.00E+00	4.34E-03	3.00E+00	1.45E-03	0.06%	0.17%
Mercury (methyl)	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	1.50E-02	0.00E+00	2.50E-02	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	7.00E-01	0.00E+00	0.00%	0.00%
Nickel	0.00E+00	0.00E+00	1.02E-02	0	0.00E+00	5.15E-02	0.00E+00	2.61E-03	0.00E+00	2.57E-02	5.50E-03	9.54E-02	4.00E+01	2.38E-03	8.00E+01	1.19E-03	0.03%	0.14%
Nitrate	7.32E-02	0.00E+00	1.76E-03	0	0.00E+00	2.15E-03	0.00E+00	2.64E-03	0.00E+00	7.30E-03	1.56E-03	8.86E-02	5.07E+02	1.75E-04	1.13E+03	7.84E-05	0.00%	0.01%
Nitrate/Nitrite	5.96E-03	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.96E-03	5.07E+02	1.18E-05	1.13E+03	5.28E-06	0.00%	0.00%
Oxychlordane	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	0.00E+00	8.31E-07	0	0.00E+00	1.35E-05	0.00E+00	1.19E-07	0.00E+00	2.39E-05	5.12E-06	4.35E-05	2.40E-01	1.81E-04	2.40E+00	1.81E-05	0.00%	0.00%
Pentachlorophenol	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	0.00E+00	3.59E-03	0	0.00E+00	4.37E-03	NA	9.89E-02	0.00E+00	1.49E-02	3.19E-03	1.25E-01	8.50E+00	1.47E-02	2.55E+01	4.90E-03	0.19%	0.59%
Selenium	0.00E+00	0.00E+00	1.42E-03	0	0.00E+00	1.26E-03	0.00E+00	3.20E-03	0.00E+00	6.91E-03	1.48E-03	1.43E-02	2.00E-01	7.14E-02	3.30E-01	4.33E-02	0.93%	5.18%
Silver	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	0.00E+00	5.11E-02	0	0.00E+00	1.52E-02	0.00E+00	7.65E-02	0.00E+00	2.12E-01	4.54E-02	4.00E-01	2.63E+02	1.52E-03	7.89E+02	5.07E-04	0.02%	0.06%
Sulfate	5.14E-01	0.00E+00	1.28E-01	0	0.00E+00	1.56E-01	0.00E+00	1.91E-01	0.00E+00	5.30E-01	1.14E-01	1.63E+00	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.40E-03	0.00E+00	7.40E-02	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	0.00E+00	3.93E-07	0	0.00E+00	6.63E-06	0.00E+00	6.79E-08	0.00E+00	1.13E-05	2.43E-06	2.08E-05	4.58E+00	4.55E-06	9.16E+00	2.27E-06	0.00%	0.00%
Vanadium	2.81E-03	0.00E+00	2.46E-02	0	0.00E+00	2.32E-03	0.00E+00	4.22E-04	0.00E+00	3.64E-03	7.80E-04	3.46E-02	2.10E-01	1.65E-01	2.10E+00	1.65E-02	2.15%	1.98%
Zinc	0.00E+00	0.00E+00	5.84E-02	0	0.00E+00	3.35E-01	0.00E+00	1.98E-01	0.00E+00	6.57E-01	1.41E-01	1.39E+00	1.60E+02	8.68E-03	3.20E+02	4.34E-03	0.11%	0.52%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.9E-04	5.8E-05	0.00%	0.01%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	1.7E-03	3.4E-04	0.02%	0.04%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	6.5E-02	6.4E-03	0.85%	0.77%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	5.7E-03	6.4E-04	0.07%	0.08%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\,x\,Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0.12	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0.03	unitless
Mammal diet fraction =	0.7	unitless
Bird diet fraction =	0.15	unitless
Soil ingestion rate =	0.004263	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.152	kg/d
Body weight =	4.5	kg
Home range =	247.1044	acres
Water intake rate =	0.38	L/d
Site Area =	2330	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-36
Tier 2 COPCs
EEQs and Hazard Indices for the Red Fox at LHAAP
Industrial Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Total Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
								--------	--------	--------	Unitless	--------	--------	--------	
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01
2,3,7,8-TCDD TEQ	1.07E-08	mg/L	5.59E-06	mg/kg	5.82E-06	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.64E-03	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.20E-02	mg/kg	1.00E+00		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	5.57E-03	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-03	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.34E-03	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Aluminum	4.16E+00	mg/L	8.09E+03	mg/kg	8.99E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.05E+00	mg/kg	1.00E+00			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	6.31E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.11E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	3.78E-02	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.70E-02	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01
Cadmium	2.09E-03	mg/L	4.57E-01	mg/kg	7.47E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	1.91E+01	8.80E-01	7.06E-01	7.06E-01	6.72E-01	6.72E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.60E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.70E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Copper	9.31E-03	mg/L	6.17E+00	mg/kg	1.33E+01	mg/kg	1.00E+00	1.11E+03	1.56E+00	8.47E-01	6.44E-01	4.03E-01	4.03E-01	8.97E-02	8.97E-02
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.51E-03	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.95E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.61E-03	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	1.65E-04	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.48E-02	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01
Iron	4.18E+00	mg/L	0.00E+00	mg/kg	1.64E+04	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E+01	1.39E+01	1.39E+01		
Lead	4.09E-03	mg/L	0.00E+00	mg/kg	3.99E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	4.02E-01	NA	5.22E-02	5.22E-02	1.16E-02	1.16E-02
Manganese	3.17E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.50E+02	4.20E-01	NA	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	2.65E-01	mg/kg	1.00E+00		1.14E+00	2.63E+00	NA	6.77E-01	6.77E-01	9.15E-02	9.15E-02
Mercury (methyl)	0.00E+00	mg/L	8.35E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	1.15E+00	NA	NA		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01
Nickel	0.00E+00	mg/L	8.12E+00	mg/kg	9.95E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	6.43E-02	6.11E-02	6.11E-02	8.71E-02	8.71E-02
Nitrate	4.79E-01	mg/L	9.50E-02	mg/kg	1.21E+00	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Nitrate/Nitrite	5.55E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.07E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.93E+00	mg/kg	1.00E+00			3.00E-01	NA	7.16E+00	7.16E+00	1.11E-01	1.11E-01
Selenium	0.00E+00	mg/L	7.51E-01	mg/kg	1.17E+00	mg/kg	1.00E+00	2.05E+02	4.50E+00	8.89E-01	4.92E-01	5.15E-01	5.15E-01	1.51E-01	1.51E-01
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	3.84E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Sulfate	5.14E+00	mg/L	1.39E+01	mg/kg	9.41E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Thallium	0.00E+00	mg/L	6.14E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.72E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Vanadium	2.64E-02	mg/L	0.00E+00	mg/kg	2.48E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03
Zinc	0.00E+00	mg/L	3.22E+01	mg/kg	5.34E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	5.90E+00	1.05E+00	8.44E-01	8.44E-01	1.84E-01	1.84E-01

Chemical	EED Surface Water (mg/kg-d)	EED Sediment (mg/kg-d)	EED Soil (mg/kg-d)	EED Fish (mg/kg-d)	EED Aq. Invert. (mg/kg-d)	EED Terr. Invert. (mg/kg-d)	EED Aq. Plants (mg/kg-d)	EED Terr. Plants (mg/kg-d)	EED Plant Roots (mg/kg-d)	EED Mammals (mg/kg-d)	EED Birds (mg/kg-d)	Total EED (mg/kg-d)	NOAEL (mg/kg-d)	EEQ N	LOAEL (mg/kg-d)	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	8.19E-10	0.00E+00	5.00E-09	0	0.00E+00	5.89E-08	0.00E+00	8.30E-11	0.00E+00	5.90E-09	1.27E-09	7.20E-08	1.00E-06	7.20E-02	1.00E-05	7.20E-03	1.28%	1.20%
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	0.00E+00	1.41E-06	0	0.00E+00	1.35E-05	0.00E+00	1.69E-07	0.00E+00	3.09E-05	6.62E-06	5.26E-05	8.00E-01	6.57E-05	4.00E+00	1.31E-05	0.00%	0.00%
4,4'-DDE	0.00E+00	0.00E+00	1.03E-05	0	0.00E+00	9.92E-05	0.00E+00	6.00E-06	0.00E+00	2.42E-04	5.19E-05	4.10E-04	8.00E-01	5.12E-04	4.00E+00	1.02E-04	0.01%	0.02%
4,4'-DDT	0.00E+00	0.00E+00	4.79E-06	0	0.00E+00	4.75E-05	0.00E+00	5.74E-07	0.00E+00	1.06E-04	2.27E-05	1.82E-04	8.00E-01	2.27E-04	4.00E+00	4.54E-05	0.00%	0.01%
Aldrin	0.00E+00	0.00E+00	1.51E-06	0	0.00E+00	1.50E-05	0.00E+00	3.14E-08	0.00E+00	3.31E-05	7.09E-06	5.67E-05	2.00E-01	2.84E-04	1.00E+00	5.67E-05	0.01%	0.01%
alpha-Chlordane	0.00E+00	0.00E+00	1.16E-06	0	0.00E+00	1.12E-05	0.00E+00	4.61E-08	0.00E+00	2.53E-05	5.42E-06	4.31E-05	4.58E+00	9.42E-06	9.16E+00	4.71E-06	0.00%	0.00%
Aluminum	3.19E-01	0.00E+00	7.74E+00	0	0.00E+00	3.56E-01	0.00E+00	4.97E-02	0.00E+00	1.28E+00	2.74E-01	1.00E+01	1.93E+00	5.19E+00	1.93E+01	5.19E-01	92.18%	86.64%
Antimony	0.00E+00	0.00E+00	1.77E-03	0	0.00E+00	5.67E-04	0.00E+00	2.79E-04	0.00E+00	4.88E-03	1.05E-03	8.54E-03	1.25E-01	6.83E-02	1.25E+00	6.83E-03	1.21%	1.14%
Aroclor 1242	0.00E+00	0.00E+00	5.43E-06	0	0.00E+00	5.30E-05	0.00E+00	1.95E-07	0.00E+00	1.19E-04	2.55E-05	2.03E-04	6.85E-02	2.96E-03	6.85E-01	2.96E-04	0.05%	0.05%
Aroclor 1248	0.00E+00	0.00E+00	9.51E-07	0	0.00E+00	9.27E-06	0.00E+00	3.41E-08	0.00E+00	2.08E-05	4.46E-06	3.55E-05	6.80E-02	5.22E-04	6.90E-01	5.15E-05	0.01%	0.01%
Aroclor 1254	0.00E+00	0.00E+00	3.25E-05	0	0.00E+00	3.25E-04	0.00E+00	4.98E-07	0.00E+00	4.04E-04	8.66E-05	8.49E-04	6.80E-02	1.25E-02	6.90E-01	1.23E-03	0.22%	0.21%
Aroclor 1260	0.00E+00	0.00E+00	1.47E-05	0	0.00E+00	1.54E-04	0.00E+00	4.03E-08	0.00E+00	6.11E-04	1.31E-04	9.11E-04	6.80E-02	1.34E-02	6.90E-01	1.32E-03	0.24%	0.22%
Aroclor 1268	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.90E-01	0.00E+00	0.00%	0.00%
Barium	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E+00	0.00E+00	1.98E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	1.60E-04	0.00E+00	6.42E-04	0	0.00E+00	1.32E-02	0.00E+00	1.94E-03	0.00E+00	1.08E-02	2.31E-03	2.90E-02	1.00E+00	2.90E-02	1.00E+01	2.90E-03	0.52%	0.48%
Chlordane	0.00E+00	0.00E+00	1.37E-07	0	0.00E+00	1.33E-06	0.00E+00	5.48E-09	0.00E+00	3.00E-06	6.43E-07	5.12E-06	4.58E+00	1.12E-06	9.16E+00	5.59E-07	0.00%	0.00%
Chromium	0.00E+00	0.00E+00	1.52E-02	0	0.00E+00	4.97E-03	0.00E+00	2.66E-03	0.00E+00	3.21E-02	6.87E-03	6.18E-02	3.28E+00	1.88E-02	1.31E+01	4.70E-03	0.33%	0.78%
cis-Nonachlor	0.00E+00	0.00E+00	2.32E-07	0	0.00E+00	2.26E-06	0.00E+00	9.26E-09	0.00E+00	5.08E-06	1.09E-06	8.66E-06	4.58E+00	1.89E-06	9.16E+00	9.46E-07	0.00%	0.00%
Copper	7.14E-04	0.00E+00	1.14E-02	0	0.00E+00	1.04E-02	0.00E+00	1.97E-02	0.00E+00	2.56E-02	5.49E-03	7.33E-02	1.17E+01	6.27E-03	1.51E+01	4.84E-03	0.11%	0.81%
Dieldrin	0.00E+00	0.00E+00	1.30E-06	0	0.00E+00	1.23E-05	0.00E+00	1.34E-07	0.00E+00	2.85E-05	6.11E-06	4.83E-05	2.00E-02	2.42E-03	2.00E-01	2.42E-04	0.04%	0.04%
Endrin	0.00E+00	0.00E+00	2.54E-07	0	0.00E+00	2.39E-06	0.00E+00	2.98E-08	0.00E+00	7.69E-06	1.65E-06	1.20E-05	9.20E-02	1.31E-04	9.20E-01	1.31E-05	0.00%	0.00%
gamma-Chlordane	0.00E+00	0.00E+00	3.10E-06	0	0.00E+00	3.02E-05	0.00E+00	1.24E-07	0.00E+00	6.79E-05	1.45E-05	1.16E-04	4.58E+00	2.53E-05	9.16E+00	1.26E-05	0.00%	0.00%
Heptachlor	0.00E+00	0.00E+00	1.42E-07	0	0.00E+00	1.36E-06	0.00E+00	6.99E-09	0.00E+00	3.10E-06	6.64E-07	5.26E-06	1.00E-01	5.26E-05	1.00E+00	5.26E-06	0.00%	0.00%
Hexachlorobenzene	0.00E+00	0.00E+00	1.27E-05	0	0.00E+00	1.22E-04	0.00E+00	8.64E-07	0.00E+00	2.78E-04	5.96E-05	4.73E-04	8.00E-02	5.91E-03	2.90E-01	1.63E-03	0.11%	0.27%
HMX	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	3.20E-01	0.00E+00	1.41E+01	0	0.00E+00	5.44E-01	0.00E+00	2.42E-01	0.00E+00	6.20E-01	1.33E-01	1.60E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	3.14E-04	0.00E+00	3.44E-02	0	0.00E+00	1.48E-02	NA	7.68E-03	0.00E+00	9.98E-03	2.14E-03	6.93E-02	8.00E+00	8.66E-03	8.00E+01	8.66E-04	0.15%	0.14%
Manganese	2.43E-02	0.00E+00	0.00E+00	0	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.43E-02	8.80E+01	2.76E-04	2.84E+02	8.55E-05	0.00%	0.01%
Mercury (inorganic)	0.00E+00	0.00E+00	2.28E-04	0	0.00E+00	6.42E-04	NA	6.62E-04	0.00E+00	5.21E-04	1.12E-04	2.16E-03	1.00E+00	2.16E-03	3.00E+00	7.22E-04	0.04%	0.12%
Mercury (methyl)	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	1.50E-02	0.00E+00	2.50E-02	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	7.00E-01	0.00E+00	0.00%	0.00%
Nickel	0.00E+00	0.00E+00	8.57E-03	0	0.00E+00	9.70E-03	0.00E+00	2.24E-03	0.00E+00	1.86E-02	3.99E-03	4.31E-02	4.00E+01	1.08E-03	8.00E+01	5.39E-04	0.02%	0.09%
Nitrate	3.67E-02	0.00E+00	1.04E-03	0	0.00E+00	3.33E-04	0.00E+00	9.32E-04	0.00E+00	2.87E-03	6.15E-04	4.25E-02	5.07E+02	8.39E-05	1.13E+03	3.76E-05	0.00%	0.01%
Nitrate/Nitrite	4.26E-03	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.26E-03	5.07E+02	8.40E-06	1.13E+03	3.77E-06	0.00%	0.00%
Oxychlordane	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	0.00E+00	4.36E-07	0	0.00E+00	4.08E-06	0.00E+00	5.12E-08	0.00E+00	9.54E-06	2.04E-06	1.62E-05	2.40E-01	6.73E-05	2.40E+00	6.73E-06	0.00%	0.00%
Pentachlorophenol	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	0.00E+00	2.52E-03	0	0.00E+00	8.09E-04	NA	7.72E-02	0.00E+00	6.96E-03	1.49E-03	8.90E-02	8.50E+00	1.05E-02	2.55E+01	3.49E-03	0.19%	0.58%
Selenium	0.00E+00	0.00E+00	1.01E-03	0	0.00E+00	9.59E-04	0.00E+00	2.22E-03	0.00E+00	3.80E-03	8.15E-04	8.81E-03	2.00E-01	4.40E-02	3.30E-01	2.67E-02	0.78%	4.46%
Silver	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	0.00E+00	3.30E-02	0	0.00E+00	3.08E-03	0.00E+00	2.97E-02	0.00E+00	9.13E-02	1.96E-02	1.77E-01	2.63E+02	6.72E-04	7.89E+02	2.24E-04	0.01%	0.04%
Sulfate	3.94E-01	0.00E+00	8.09E-02	0	0.00E+00	2.60E-02	0.00E+00	7.27E-02	0.00E+00	2.24E-01	4.79E-02	8.45E-01	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.40E-03	0.00E+00	7.40E-02	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	0.00E+00	2.34E-07	0	0.00E+00	2.27E-06	0.00E+00	9.32E-09	0.00E+00	5.11E-06	1.10E-06	8.72E-06	4.58E+00	1.90E-06	9.16E+00	9.52E-07	0.00%	0.00%
Vanadium	2.02E-03	0.00E+00	2.14E-02	0	0.00E+00	9.60E-04	0.00E+00	3.29E-04	0.00E+00	2.93E-03	6.27E-04	2.82E-02	2.10E-01	1.34E-01	2.10E+00	1.34E-02	2.39%	2.25%
Zinc	0.00E+00	0.00E+00	4.59E-02	0	0.00E+00	2.90E-01	0.00E+00	1.66E-01	0.00E+00	2.11E-01	4.53E-02	7.58E-01	1.60E+02	4.74E-03	3.20E+02	2.37E-03	0.08%	0.40%

Group	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	9.2E-05	2.5E-05	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	8.1E-04	1.6E-04	0.01%	0.03%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	2.9E-02	2.9E-03	0.52%	0.48%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	2.8E-03	3.1E-04	0.05%	0.05%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\, x Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0.12	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0.03	unitless
Mammal diet fraction =	0.7	unitless
Bird diet fraction =	0.15	unitless
Soil ingestion rate =	0.004263	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.152	kg/d
Body weight =	4.5	kg
Home range =	2565	acres
Water intake rate =	0.38	L/d
Site Area =	2330	acres
Area Use Factor (AUF) =	0.908382	unitless
Exposure Duration (ED) =	1	unitless

Table E-37
Tier 1 COPCs
EEQs and Hazard Indices for the Muskrat at LHAAP
Industrial Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL		LOAEL		Percent Contribution to	Percent Contribution to
									-----Unitless-----							mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	EEQ N	mg/kg-d	EEQ L	EEQ N	EEQ L
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	1.22E-08	mg/L	8.87E-06	mg/kg	9.34E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	1.18E-09	6.11E-08	0.00E+00	0	0.00E+00	0.00E+00	1.33E-09	3.11E-10	1.33E-09	0.00E+00	0.00E+00	6.53E-08	1.00E-06	6.53E-02	1.00E-05	6.53E-03	0.17%	0.15%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.77E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.04E-06	0.00E+00	0.00E+00	0.00E+00	1.04E-06	8.00E-01	1.30E-06	4.00E+00	2.60E-07	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.82E-02	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	8.28E-05	0.00E+00	0.00E+00	0.00E+00	8.28E-05	8.00E-01	1.03E-04	4.00E+00	2.07E-05	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	6.08E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	3.57E-06	0.00E+00	0.00E+00	0.00E+00	3.57E-06	8.00E-01	4.46E-06	4.00E+00	8.92E-07	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.50E-03	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	7.46E-08	0.00E+00	0.00E+00	0.00E+00	7.46E-08	2.00E-01	3.73E-07	1.00E+00	7.46E-08	0.00%	0.00%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.08E-03	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	6.15E-07	0.00E+00	0.00E+00	0.00E+00	6.15E-07	4.58E+00	1.34E-07	9.16E+00	6.71E-08	0.00%	0.00%
Aluminum	6.11E+00	mg/L	9.69E+03	mg/kg	7.38E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	5.93E-01	6.68E+01	0.00E+00	0	0.00E+00	0.00E+00	7.36E-01	1.25E-01	7.36E-01	0.00E+00	0.00E+00	6.90E+01	1.93E+00	3.58E+01	1.93E+01	3.58E+00	92.00%	82.40%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E+00	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.30E-03	0.00E+00	0.00E+00	0.00E+00	1.30E-03	1.25E-01	1.04E-02	1.25E+00	1.04E-03	0.03%	0.02%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	6.94E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	8.31E-06	0.00E+00	0.00E+00	0.00E+00	8.31E-06	6.85E-02	1.21E-04	6.85E-01	1.21E-05	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.45E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.08E-07	0.00E+00	0.00E+00	0.00E+00	1.08E-07	6.80E-02	1.58E-06	6.80E-01	1.58E-07	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	5.66E-02	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	3.67E-06	0.00E+00	0.00E+00	0.00E+00	3.67E-06	6.80E-02	5.40E-05	6.80E-01	5.40E-06	0.00%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.69E-02	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	5.64E-07	0.00E+00	0.00E+00	0.00E+00	5.64E-07	6.80E-02	8.30E-06	6.80E-01	8.30E-07	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.80E-01	0.00E+00	0.00%	0.00%
Barium	0.00E+00	mg/L	1.32E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	9.12E-01	0.00E+00	0	0.00E+00	0.00E+00	4.02E+00	0.00E+00	4.02E+00	0.00E+00	0.00E+00	8.95E+00	5.10E+00	1.75E+00	1.98E+01	4.52E-01	4.51%	10.41%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	2.49E-03	mg/L	5.48E-01	mg/kg	4.03E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.52E+01	8.11E-01	9.31E-01	8.11E-01	9.22E-01	9.22E-01	2.42E-04	3.78E-03	0.00E+00	0	0.00E+00	0.00E+00	1.47E-02	2.75E-03	1.47E-02	0.00E+00	0.00E+00	3.61E-02	1.00E+00	3.61E-02	1.00E+01	3.61E-03	0.09%	0.08%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.84E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	5.44E-08	0.00E+00	0.00E+00	0.00E+00	5.44E-08	4.58E+00	1.19E-08	9.16E+00	5.94E-09	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.82E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	6.40E-02	0.00E+00	0.00E+00	0.00E+00	6.40E-02	3.28E+00	1.95E-02	1.31E+01	4.87E-03	0.05%	0.11%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.40E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.01E-07	0.00E+00	0.00E+00	0.00E+00	1.01E-07	4.58E+00	2.20E-08	9.16E+00	1.10E-08	0.00%	0.00%
Copper	1.18E-02	mg/L	7.20E+00	mg/kg	1.87E+01	mg/kg	1.00E+00	5.92E+03	5.25E+00	6.54E-01	5.86E-01	3.28E-01	5.86E-01	1.49E-01	1.49E-01	1.15E-03	4.96E-02	0.00E+00	0	0.00E+00	0.00E+00	1.39E-01	4.49E-02	1.39E-01	0.00E+00	0.00E+00	3.74E-01	1.17E+01	3.20E-02	1.51E+01	2.47E-02	0.08%	0.57%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.29E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	3.96E-06	0.00E+00	0.00E+00	0.00E+00	3.96E-06	2.00E-02	1.98E-04	2.00E-01	1.98E-05	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.80E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.07E-07	0.00E+00	0.00E+00	0.00E+00	1.07E-07	9.20E-02	1.16E-06	9.20E-01	1.16E-07	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	9.74E-03	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	2.88E-06	0.00E+00	0.00E+00	0.00E+00	2.88E-06	4.58E+00	6.29E-07	9.16E+00	3.14E-07	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.11E-04	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	2.46E-08	0.00E+00	0.00E+00	0.00E+00	2.46E-08	1.00E-01	2.46E-07	1.00E+00	2.46E-08	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.77E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	2.45E-08	0.00E+00	0.00E+00	0.00E+00	2.45E-08	8.00E-02	3.07E-07	2.90E-01	8.46E-08	0.00%	0.00%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	5.98E+00	mg/L	0.00E+00	mg/kg	1.68E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	5.80E-01	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	4.93E-01	0.00E+00	0.00E+00	0.00E+00	1.07E+00	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	4.21E-04	0.00E+00	0	0.00E+00	0.00E+00	2.84E-02	0.00E+00	2.84E-02	0.00E+00	0.00E+00	5.71E-02	NA	NA	NA	NA	NA	NA
Lead	5.18E-03	mg/L	0.00E+00	mg/kg	7.30E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	3.59E-01	NA	4.00E-02	NA	1.33E-02	1.33E-02	5.03E-04	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	NA	2.14E-02	NA	0.00E+00	0.00E+00	2.19E-02	8.00E+00	2.74E-03	8.00E+01	2.74E-04	0.01%	0.01%
Manganese	4.54E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+03	2.10E+00	NA	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	4.41E-02	0.00E+00	0.00E+00	0	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.41E-02	8.80E+01	5.01E-04	2.84E+02	1.55E-04	0.00%	0.00%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	7.96E-01	mg/kg	1.00E+00		2.87E+00	1.26E+00	NA	4.09E-01	NA	1.03E-01	1.03E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	NA	2.38E-03	NA	0.00E+00	0.00E+00	2.38E-03	1.32E+01	1.81E-04	3.96E+01	6.02E-05	0.00%	0.00%
Mercury (methyl)	0.00E+00	mg/L	9.58E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.08E+00	NA	1.08E+00			0.00E+00	6.60E-04	0.00E+00	0	0.00E+00	NA	3.42E-03	NA	3.42E-03	0.00E+00	0.00E+00	7.50E-03	3.20E-02	2.34E-01	1.60E-01	4.69E-02	0.60%	1.08%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	7.00E-01	0.00E+00	0.00%	0.00%
Nickel	0.00E+00	mg/L	9.33E+00	mg/kg	8.88E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	6.21E-02	6.29E-02	6.21E-02	1.01E-01	1.01E-01	0.00E+00	6.43E-02	0.00E+00	0	0.00E+00	0.00E+00	1.91E-02	4.10E-03	1.91E-02	0.00E+00	0.00E+00	1.07E-01	4.00E+01	2.67E-03	8.00E+01	1.33E-03	0.01%	0.03%
Nitrate	8.67E-01	mg/L	1.30E-01	mg/kg	1.12E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	8.42E-02	8.94E-04	0.00E+00	0	0.00E+00	0.00E+00	1.50E-03	2.87E-03	1.50E-03	0.00E+00	0.00E+00	9.10E-02	5.07E+02	1.79E-04	1.13E+03	8.05E-05	0.00%	0.00%
Nitrate/Nitrite	7.06E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03								6.86E-03	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.86E-03	5.07E+02	1.35E-05	1.13E+03	6.07E-06	0.00%	0.00%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	7.16E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.76E-07	0.00E+00	0.00E+00	0.00E+00	1.76E-07	2.40E-01	7.33E-07	2.40E+00	7.33E-08	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	3.62E+00	mg/kg	1.00E+00			1.14E+00	NA	6.57E+00	6.57E+00	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	NA	1.74E-01	0.00E+00	0.00E+00	0.00E+00	1.74E-01	8.50E+00	2.05E-02	2.55E+01	6.83E-03	0.05%	0.16%
Selenium	0.00E+00	mg/L	8.67E-01	mg/kg	2.63E+00	mg/kg	1.00E+00	2.05E+02	4.50E+00	7.15E-01	4.99E-01	5.58E-01	4.99E-01	1.95E-01	1.95E-01	0.00E+00	5.97E-03	0.00E+00	0	0.00E+00	0.00E+00	1.43E-02	1.08E-02	1.43E-02	0.00E+00	0.00E+00	4.53E-02	2.00E-01	2.26E-01	3.30E-01	1.37E-01	0.58%	3.16%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.65E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	6.81E-02	0.00E+00	0.00E+00	0.00E+00	6.81E-02	2.63E+02	2.59E-04	7.89E+02	8.63E-05	0.00%	0.00%
Sulfate	6.09E+00	mg/L	2.00E+01	mg/kg	1.75E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	5.92E-01	1.38E-01	0.00E+00	0	0.00E+00	0.00E+00	2.31E-01	4.50E-01	2.31E-01	0.00E+00	0.00E+00	1.64E+00	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	7.12E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00							0.00E+00	4.91E-03	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.91E-03	7.40E-03	6.63E-01	7.40E-02	6.63E-02	1.71%	1.53%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.59E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.06E-07	0.00E+00	0.00E+00	0.00E+00	1.06E-07	4.58E+00	2.32E-08	9.16E+00	1.16E-08	0.00%	0.00%
Vanadium	3.33E-02	mg/L	0.00E+00	mg/kg	2.54E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	3.23E-03	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	7.45E-04	0.00E+00	0.00E+00	0.00E+00	3.98E-03	2.10E-01	1.89E-02	2.10E+00	1.89E-03	0.05%	0.04%
Zinc	0.00E+00	mg/L	3.82E+01	mg/kg	7.62E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	4.65E+00	9.78E-01	7.21E-01	9.78E-01	4.51E-01	4.51E-01	0.00E+00	2.63E-01	0.00E+00	0	0.00E+00	0.00E+00	1.23E+00	4.03E-01	1.23E+00	0.00E+00	0.00E+00	3.13E+00	1.60E+02	1.96E-02	3.20E+02	9.78E-03	0.05%	0.23%

	EEQ N	EEQ L	Percent EEQ N	Percent EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.1E-06	4.3E-07	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	1.1E-04	2.2E-05	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.9E-04	1.9E-05	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	2.0E-04	2.0E-05	0.00%	0.00%

Intake Equation:

$$E_j = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi \times Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0.1	unitless
Aquatic plant diet fraction =	0.45	unitless
Plant root diet fraction =	0.45	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0.008093	kg/d
Food ingestion rate =	0.0861	kg/d
Body weight =	1.174	kg
Home range =	0.11861	acres
Water intake rate =	0.114	L/d
Site Area =	262	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-38
Tier 2 COPCs
EEQs and Hazard Indices for the Muskrat at LHAAP
Industrial Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
							---Unitless---								
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01
2,3,7,8-TCDD TEQ	1.07E-08	mg/L	5.59E-06	mg/kg	7.39E-06	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.51E-03	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E-02	mg/kg	1.00E+00		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	4.99E-03	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.38E-03	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.28E-03	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Aluminum	4.16E+00	mg/L	8.09E+03	mg/kg	7.05E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E+00	mg/kg	1.00E+00			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	5.90E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.27E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.34E-02	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.47E-02	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01
Cadmium	2.09E-03	mg/L	4.57E-01	mg/kg	3.79E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	2.60E+01	8.80E-01	9.58E-01	8.80E-01	6.72E-01	6.72E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.60E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.76E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Copper	9.31E-03	mg/L	6.17E+00	mg/kg	1.76E+01	mg/kg	1.00E+00	1.11E+03	1.56E+00	6.85E-01	6.44E-01	3.40E-01	6.44E-01	8.97E-02	8.97E-02
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.78E-04	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.31E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-03	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	1.86E-04	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.54E-04	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01
Iron	4.18E+00	mg/L	0.00E+00	mg/kg	1.59E+04	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E+01	1.39E+01	1.39E+01		
Lead	4.09E-03	mg/L	0.00E+00	mg/kg	6.49E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	3.67E-01	NA	4.22E-02	NA	1.16E-02	1.16E-02
Manganese	3.17E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.50E+02	4.20E-01	NA	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	4.57E-01	mg/kg	1.00E+00		1.14E+00	1.83E+00	NA	5.28E-01	NA	9.15E-02	9.15E-02
Mercury (methyl)	0.00E+00	mg/L	8.35E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	1.15E+00	NA	1.15E+00		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01
Nickel	0.00E+00	mg/L	8.12E+00	mg/kg	8.33E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	6.43E-02	6.39E-02	6.43E-02	8.71E-02	8.71E-02
Nitrate	4.79E-01	mg/L	9.50E-02	mg/kg	9.11E-01	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Nitrate/Nitrite	5.55E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E+00	mg/kg	1.00E+00			3.00E-01	NA	8.18E+00	8.18E+00	1.11E-01	1.11E-01
Selenium	0.00E+00	mg/L	7.51E-01	mg/kg	1.98E+00	mg/kg	1.00E+00	2.05E+02	4.50E+00	7.72E-01	4.92E-01	5.42E-01	4.92E-01	1.51E-01	1.51E-01
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.46E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Sulfate	5.14E+00	mg/L	1.39E+01	mg/kg	1.16E+02	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Thallium	0.00E+00	mg/L	6.14E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.82E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Vanadium	2.64E-02	mg/L	0.00E+00	mg/kg	2.38E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03
Zinc	0.00E+00	mg/L	3.22E+01	mg/kg	7.04E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	4.90E+00	1.05E+00	7.47E-01	1.05E+00	1.84E-01	1.84E-01

Chemical	EED Surface Water (mg/kg-d)	EED Sediment (mg/kg-d)	EED Soil (mg/kg-d)	EED Fish (mg/kg-d)	EED Aq. Invert. (mg/kg-d)	EED Terr. Invert. (mg/kg-d)	EED Aq. Plants (mg/kg-d)	EED Terr. Plants (mg/kg-d)	EED Plant Roots (mg/kg-d)	EED Mammals (mg/kg-d)	EED Birds (mg/kg-d)	Total EED (mg/kg-d)	NOAEL (mg/kg-d)	EEQ N	LOAEL (mg/kg-d)	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	1.04E-09	3.85E-08	0.00E+00	0	0.00E+00	0.00E+00	7.15E-10	2.10E-10	7.15E-10	0.00E+00	0.00E+00	4.12E-08	1.00E-06	4.12E-02	1.00E-05	4.12E-03	0.13%	0.12%
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	3.09E-07	0.00E+00	0.00E+00	0.00E+00	3.09E-07	8.00E-01	3.87E-07	4.00E+00	7.73E-08	0.00%	0.00%
4,4'-DDE	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.43E-05	0.00E+00	0.00E+00	0.00E+00	1.43E-05	8.00E-01	1.78E-05	4.00E+00	3.56E-06	0.00%	0.00%
4,4'-DDT	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.02E-06	0.00E+00	0.00E+00	0.00E+00	1.02E-06	8.00E-01	1.28E-06	4.00E+00	2.56E-07	0.00%	0.00%
Aldrin	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	4.92E-08	0.00E+00	0.00E+00	0.00E+00	4.92E-08	2.00E-01	2.46E-07	1.00E+00	4.92E-08	0.00%	0.00%
alpha-Chlordane	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	8.78E-08	0.00E+00	0.00E+00	0.00E+00	8.78E-08	4.58E+00	1.92E-08	9.16E+00	9.58E-09	0.00%	0.00%
Aluminum	4.04E-01	5.58E+01	0.00E+00	0	0.00E+00	0.00E+00	4.00E-01	7.75E-02	4.00E-01	0.00E+00	0.00E+00	5.71E+01	1.93E+00	2.96E+01	1.93E+01	2.96E+00	95.06%	89.01%
Antimony	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	6.47E-04	0.00E+00	0.00E+00	0.00E+00	6.47E-04	1.25E-01	5.17E-03	1.25E+00	5.17E-04	0.02%	0.02%
Aroclor 1242	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	3.63E-07	0.00E+00	0.00E+00	0.00E+00	3.63E-07	6.85E-02	5.29E-06	6.85E-01	5.29E-07	0.00%	0.00%
Aroclor 1248	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	7.83E-08	0.00E+00	0.00E+00	0.00E+00	7.83E-08	6.80E-02	1.15E-06	6.80E-01	1.15E-07	0.00%	0.00%
Aroclor 1254	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.14E-06	0.00E+00	0.00E+00	0.00E+00	1.14E-06	6.80E-02	1.67E-05	6.80E-01	1.67E-06	0.00%	0.00%
Aroclor 1260	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	6.94E-08	0.00E+00	0.00E+00	0.00E+00	6.94E-08	6.80E-02	1.02E-06	6.80E-01	1.02E-07	0.00%	0.00%
Aroclor 1268	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.80E-01	0.00E+00	0.00%	0.00%
Barium	0.00E+00	8.14E-01	0.00E+00	0	0.00E+00	0.00E+00	6.08E-01	0.00E+00	6.08E-01	0.00E+00	0.00E+00	2.03E+00	5.10E+00	3.98E-01	1.98E+01	1.03E-01	1.28%	3.09%
Benzoic Acid	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	2.02E-04	3.15E-03	0.00E+00	0	0.00E+00	0.00E+00	1.33E-02	2.66E-03	1.33E-02	0.00E+00	0.00E+00	3.26E-02	1.00E+00	3.26E-02	1.00E+01	3.26E-03	0.10%	0.10%
Chlordane	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.09E-08	0.00E+00	0.00E+00	0.00E+00	1.09E-08	4.58E+00	2.38E-09	9.16E+00	1.19E-09	0.00%	0.00%
Chromium	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	5.21E-03	0.00E+00	0.00E+00	0.00E+00	5.21E-03	3.28E+00	1.59E-03	1.31E+01	3.96E-04	0.01%	0.01%
cis-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.89E-08	0.00E+00	0.00E+00	0.00E+00	1.89E-08	4.58E+00	4.12E-09	9.16E+00	2.06E-09	0.00%	0.00%
Copper	9.04E-04	4.25E-02	0.00E+00	0	0.00E+00	0.00E+00	1.31E-01	4.38E-02	1.31E-01	0.00E+00	0.00E+00	3.49E-01	1.17E+01	2.99E-02	1.51E+01	2.31E-02	0.10%	0.69%
Dieldrin	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	4.90E-08	0.00E+00	0.00E+00	0.00E+00	4.90E-08	2.00E-02	2.45E-06	2.00E-01	2.45E-07	0.00%	0.00%
Endrin	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	6.66E-08	0.00E+00	0.00E+00	0.00E+00	6.66E-08	9.20E-02	7.24E-07	9.20E-01	7.24E-08	0.00%	0.00%
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	3.69E-07	0.00E+00	0.00E+00	0.00E+00	3.69E-07	4.58E+00	8.07E-08	9.16E+00	4.03E-08	0.00%	0.00%
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.57E-08	0.00E+00	0.00E+00	0.00E+00	1.57E-08	1.00E-01	1.57E-07	1.00E+00	1.57E-08	0.00%	0.00%
Hexachlorobenzene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.79E-08	0.00E+00	0.00E+00	0.00E+00	1.79E-08	8.00E-02	2.24E-07	2.90E-01	6.19E-08	0.00%	0.00%
HMX	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	4.05E-01	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	4.65E-01	0.00E+00	0.00E+00	0.00E+00	8.71E-01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	4.21E-04	0.00E+00	0	0.00E+00	0.00E+00	2.80E-02	0.00E+00	2.80E-02	0.00E+00	0.00E+00	5.64E-02	NA	NA	NA	NA	NA	NA
Lead	3.97E-04	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	NA	2.01E-02	NA	0.00E+00	0.00E+00	2.05E-02	8.00E+00	2.56E-03	8.00E+01	2.56E-04	0.01%	0.01%
Manganese	3.07E-02	0.00E+00	0.00E+00	0	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.07E-02	8.80E+01	3.49E-04	2.84E+02	1.08E-04	0.00%	0.00%
Mercury (inorganic)	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	NA	1.77E-03	NA	0.00E+00	0.00E+00	1.77E-03	1.32E+01	1.34E-04	3.96E+01	4.46E-05	0.00%	0.00%
Mercury (methyl)	0.00E+00	5.75E-04	0.00E+00	0	0.00E+00	NA	3.18E-03	NA	3.18E-03	0.00E+00	0.00E+00	6.93E-03	3.20E-02	2.16E-01	1.60E-01	4.33E-02	0.70%	1.30%
Mirex	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	7.00E-01	0.00E+00	0.00%	0.00%
Nickel	0.00E+00	5.60E-02	0.00E+00	0	0.00E+00	0.00E+00	1.72E-02	3.91E-03	1.72E-02	0.00E+00	0.00E+00	9.44E-02	4.00E+01	2.36E-03	8.00E+01	1.18E-03	0.01%	0.04%
Nitrate	4.65E-02	6.55E-04	0.00E+00	0	0.00E+00	0.00E+00	6.58E-04	1.40E-03	6.58E-04	0.00E+00	0.00E+00	4.99E-02	5.07E+02	9.84E-05	1.13E+03	4.41E-05	0.00%	0.00%
Nitrate/Nitrite	5.39E-03	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.39E-03	5.07E+02	1.06E-05	1.13E+03	4.77E-06	0.00%	0.00%
Oxychlordane	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.02E-07	0.00E+00	0.00E+00	0.00E+00	1.02E-07	2.40E-01	4.26E-07	2.40E+00	4.26E-08	0.00%	0.00%
Pentachlorophenol	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	NA	1.27E-01	0.00E+00	0.00E+00	0.00E+00	1.27E-01	8.50E+00	1.49E-02	2.55E+01	4.98E-03	0.05%	0.15%
Selenium	0.00E+00	5.18E-03	0.00E+00	0	0.00E+00	0.00E+00	1.22E-02	7.87E-03	1.22E-02	0.00E+00	0.00E+00	3.74E-02	2.00E-01	1.87E-01	3.30E-01	1.13E-01	0.60%	3.42%
Silver	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	3.79E-02	0.00E+00	0.00E+00	0.00E+00	3.79E-02	2.63E+02	1.44E-04	7.89E+02	4.80E-05	0.00%	0.00%
Sulfate	4.99E-01	9.57E-02	0.00E+00	0	0.00E+00	0.00E+00	9.62E-02	1.79E-01	9.62E-02	0.00E+00	0.00E+00	9.66E-01	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	4.23E-03	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.23E-03	7.40E-03	5.72E-01	7.40E-02	5.72E-02	1.84%	1.72%
trans-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.93E-08	0.00E+00	0.00E+00	0.00E+00	1.93E-08	4.58E+00	4.21E-09	9.16E+00	2.10E-09	0.00%	0.00%
Vanadium	2.56E-03	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	6.29E-04	0.00E+00	0.00E+00	0.00E+00	3.19E-03	2.10E-01	1.52E-02	2.10E+00	1.52E-03	0.05%	0.05%
Zinc	0.00E+00	2.22E-01	0.00E+00	0	0.00E+00	0.00E+00	1.12E+00	3.86E-01	1.12E+00	0.00E+00	0.00E+00	2.85E+00	1.60E+02	1.78E-02	3.20E+02	8.90E-03	0.06%	0.27%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	2.7E-07	7.1E-08	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	1.9E-05	3.9E-06	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	2.4E-05	2.4E-06	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	3.4E-06	3.7E-07	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi \, x \, Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this mission.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0.1	unitless
Aquatic plant diet fraction =	0.45	unitless
Plant root diet fraction =	0.45	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0.008093	kg/d
Food ingestion rate =	0.0861	kg/d
Body weight =	1.174	kg
Home range =	0.33112	acres
Water intake rate =	0.114	L/d
Site Area =	262	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-39
Tier 1 COPCs
EEQs and Hazard Indices for the River Otter at LHAAP
Industrial Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							---Unitless---									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	1.22E-08	mg/L	8.87E-06	mg/kg	9.34E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	3.55E-10	1.97E-09	0.00E+00	3.19E-05	1.66E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.86E-10	3.20E-05	1.00E-06	3.20E+01	1.00E-05	3.20E+00	56.91%	55.49%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.77E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E-06	1.74E-06	8.00E-01	2.18E-06	4.00E+00	4.35E-07	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.82E-02	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.54E-05	1.54E-05	8.00E-01	1.93E-05	4.00E+00	3.86E-06	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	6.08E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.63E-06	8.63E-06	8.00E-01	1.08E-05	4.00E+00	2.16E-06	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.50E-03	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.48E-06	1.48E-06	2.00E-01	7.39E-06	1.00E+00	1.48E-06	0.00%	0.00%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.08E-03	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.05E-06	2.05E-06	4.58E+00	4.47E-07	9.16E+00	2.23E-07	0.00%	0.00%
Aluminum	6.11E+00	mg/L	9.69E+03	mg/kg	7.38E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	1.78E-01	2.15E+00	0.00E+00	4.04E-01	3.72E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.46E-02	4.00E+01	1.93E+00	2.07E+01	1.93E+01	2.07E+00	36.84%	35.92%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E+00	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.58E-04	3.58E-04	1.25E-01	2.87E-03	1.25E+00	2.87E-04	0.01%	0.00%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	6.94E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.83E-06	6.83E-06	6.85E-02	9.97E-05	6.85E-01	9.97E-06	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.45E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.43E-06	1.43E-06	6.80E-02	2.10E-05	6.90E-01	2.07E-06	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	5.66E-02	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.13E-05	5.13E-05	6.80E-02	7.54E-04	6.90E-01	7.43E-05	0.00%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.69E-02	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.77E-05	2.77E-05	6.80E-02	4.08E-04	6.90E-01	4.02E-05	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.90E-01	0.00E+00	0.00%	0.00%
Barium	0.00E+00	mg/L	1.32E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	2.94E-02	0.00E+00	0.00E+00	5.08E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.38E-01	5.10E+00	1.05E-01	1.98E+01	2.72E-02	0.19%	0.47%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	2.49E-03	mg/L	5.48E-01	mg/kg	4.03E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.52E+01	8.11E-01	9.31E-01	9.31E-01	9.22E-01	9.22E-01	7.24E-05	1.22E-04	0.00E+00	6.23E-02	3.74E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.17E-04	6.65E-02	1.00E+00	6.65E-02	1.00E+01	6.65E-03	0.12%	0.12%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.84E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.81E-07	1.81E-07	4.58E+00	3.95E-08	9.16E+00	1.98E-08	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.82E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.17E-03	5.17E-03	3.28E+00	1.58E-03	1.31E+01	3.93E-04	0.00%	0.01%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.40E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.35E-07	3.35E-07	4.58E+00	7.31E-08	9.16E+00	3.65E-08	0.00%	0.00%
Copper	1.18E-02	mg/L	7.20E+00	mg/kg	1.87E+01	mg/kg	1.00E+00	5.92E+03	5.25E+00	6.54E-01	5.86E-01	3.28E-01	3.28E-01	1.49E-01	1.49E-01	3.44E-04	1.60E-03	0.00E+00	1.07E+00	3.23E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.38E-03	1.11E+00	1.17E+01	9.48E-02	1.51E+01	7.33E-02	0.17%	1.27%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.29E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.24E-07	3.24E-07	2.00E-02	1.62E-05	2.00E-01	1.62E-06	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.80E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.95E-07	3.95E-07	9.20E-02	4.29E-06	9.20E-01	4.29E-07	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	9.74E-03	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.58E-06	9.58E-06	4.58E+00	2.09E-06	9.16E+00	1.05E-06	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.11E-04	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.07E-07	2.07E-07	1.00E-01	2.07E-06	1.00E+00	2.07E-07	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.77E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E-07	1.74E-07	8.00E-02	2.18E-06	2.90E-01	6.01E-07	0.00%	0.00%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	5.98E+00	mg/L	0.00E+00	mg/kg	1.68E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	1.74E-01	0.00E+00	0.00E+00	9.18E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.97E-02	9.20E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	1.35E-05	0.00E+00	0.00E+00	1.14E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E-03	NA	NA	NA	NA	NA	NA
Lead	5.18E-03	mg/L	0.00E+00	mg/kg	7.30E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	3.59E-01	NA	4.00E-02	4.00E-02	1.33E-02	1.33E-02	1.51E-04	0.00E+00	0.00E+00	1.19E-01	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	8.29E-04	1.20E-01	8.00E+00	1.50E-02	8.00E+01	1.50E-03	0.03%	0.03%
Manganese	4.54E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+03	2.10E+00	NA	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	1.32E-02	0.00E+00	0.00E+00	1.40E+01	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.40E+01	8.80E+01	1.59E-01	2.84E+02	4.92E-02	0.28%	0.85%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	7.96E-01	mg/kg	1.00E+00		2.87E+00	1.26E+00	NA	4.09E-01	4.09E-01	1.03E-01	1.03E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	6.99E-05	6.99E-05	1.00E+00	6.99E-05	3.00E+00	2.33E-05	0.00%	0.00%
Mercury (methyl)	0.00E+00	mg/L	9.58E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.08E+00	NA	NA			0.00E+00	2.13E-05	0.00E+00	0.00E+00	2.34E-04	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	2.56E-04	1.50E-02	1.70E-02	2.50E-02	1.02E-02	0.03%	0.18%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	7.00E-01	0.00E+00	0.00%	0.00%
Nickel	0.00E+00	mg/L	9.33E+00	mg/kg	8.88E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	6.21E-02	6.29E-02	6.29E-02	1.01E-01	1.01E-01	0.00E+00	2.07E-03	0.00E+00	0.00E+00	1.85E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.66E-04	2.13E-02	4.00E+01	5.33E-04	8.00E+01	2.66E-04	0.00%	0.00%
Nitrate	8.67E-01	mg/L	1.30E-01	mg/kg	1.12E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	2.52E-02	2.88E-05	0.00E+00	1.42E+01	2.32E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.58E-04	1.43E+01	5.07E+02	2.81E-02	1.13E+03	1.26E-02	0.05%	0.22%
Nitrate/Nitrite	7.06E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03								2.06E-03	0.00E+00	0.00E+00	1.16E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.16E+00	5.07E+02	2.29E-03	1.13E+03	1.03E-03	0.00%	0.02%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	7.16E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.05E-07	7.05E-07	2.40E-01	2.94E-06	2.40E+00	2.94E-07	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	3.62E+00	mg/kg	1.00E+00			1.14E+00	NA	6.57E+00	6.57E+00	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	5.13E-04	5.13E-04	8.50E+00	6.03E-05	2.55E+01	2.01E-05	0.00%	0.00%
Selenium	0.00E+00	mg/L	8.67E-01	mg/kg	2.63E+00	mg/kg	1.00E+00	2.05E+02	4.50E+00	7.15E-01	4.99E-01	5.58E-01	5.58E-01	1.95E-01	1.95E-01	0.00E+00	1.92E-04	0.00E+00	0.00E+00	3.33E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.37E-04	3.96E-03	2.00E-01	1.98E-02	3.30E-01	1.20E-02	0.04%	0.21%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.65E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.76E-03	3.76E-03	2.63E+02	1.43E-05	7.89E+02	4.77E-06	0.00%	0.00%
Sulfate	6.09E+00	mg/L	2.00E+01	mg/kg	1.75E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	1.77E-01	4.43E-03	0.00E+00	9.99E+01	3.58E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.49E-02	1.00E+02	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	7.12E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00							0.00E+00	1.58E-04	0.00E+00	0.00E+00	2.73E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.89E-03	7.40E-03	3.91E-01	7.40E-02	3.91E-02	0.69%	0.68%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.59E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.53E-07	3.53E-07	4.58E+00	7.71E-08	9.16E+00	3.85E-08	0.00%	0.00%
Vanadium	3.33E-02	mg/L	0.00E+00	mg/kg	2.54E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	9.70E-04	0.00E+00	0.00E+00	5.46E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E-04	5.48E-01	2.10E-01	2.61E+00	2.10E+00	2.61E-01	4.63%	4.52%
Zinc	0.00E+00	mg/L	3.82E+01	mg/kg	7.62E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	4.65E+00	9.78E-01	7.21E-01	7.21E-01	4.51E-01	4.51E-01	0.00E+00	8.47E-03	0.00E+00	0.00E+00	2.45E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.93E-02	2.83E-01	1.60E+02	1.77E-03	3.20E+02	8.85E-04	0.00%	0.02%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	4.8E-06	1.6E-06	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	3.2E-05	6.5E-06	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.3E-03	1.3E-04	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	2.8E-05	3.5E-06	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi x Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.9	unitless
Aq. Invert diet fraction =	0.05	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0.05	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0.00494	kg/d
Food ingestion rate =	0.38	kg/d
Body weight =	8	kg
Home range =	729	acres
Water intake rate =	0.648	L/d
Site Area =	262	acres
Area Use Factor (AUF) =	0.359396	unitless
Exposure Duration (ED) =	1	unitless

Table E-40
Tier 2 COPCs
EEQs and Hazard Indices for the River Otter at LHAAP
Industrial Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF (Unitless)	Fish BAF (Unitless)	Aq. Invert. BAF (Unitless)	Terr. Invert. BAF (Unitless)	Aq. Plant BAF (Unitless)	Terr. Plant BAF (Unitless)	Plant Root BAF (Unitless)	Mammal BAF (Unitless)	Bird BAF (Unitless)
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01
2,3,7,8-TCDD TEQ	1.07E-08	mg/L	5.59E-06	mg/kg	7.39E-06	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.51E-03	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E-02	mg/kg	1.00E+00		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	4.99E-03	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.38E-03	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.28E-03	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Aluminum	4.16E+00	mg/L	8.09E+03	mg/kg	7.05E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E+00	mg/kg	1.00E+00			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	5.90E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.27E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.34E-02	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.47E-02	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01
Cadmium	2.09E-03	mg/L	4.57E-01	mg/kg	3.79E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	2.60E+01	8.80E-01	9.58E-01	9.58E-01	6.72E-01	6.72E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.60E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.76E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Copper	9.31E-03	mg/L	6.17E+00	mg/kg	1.76E+01	mg/kg	1.00E+00	1.11E+03	1.56E+00	6.85E-01	6.44E-01	3.40E-01	3.40E-01	8.97E-02	8.97E-02
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.78E-04	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.31E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-03	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	1.86E-04	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.54E-04	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01
Iron	4.18E+00	mg/L	0.00E+00	mg/kg	1.59E+04	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E+01	1.39E+01	1.39E+01		
Lead	4.09E-03	mg/L	0.00E+00	mg/kg	6.49E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	3.67E-01	NA	4.22E-02	4.22E-02	1.16E-02	1.16E-02
Manganese	3.17E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.50E+02	4.20E-01	NA	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	4.57E-01	mg/kg	1.00E+00		1.14E+00	1.83E+00	NA	5.28E-01	5.28E-01	9.15E-02	9.15E-02
Mercury (methyl)	0.00E+00	mg/L	8.35E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	1.15E+00	NA	NA		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01
Nickel	0.00E+00	mg/L	8.12E+00	mg/kg	8.33E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	6.43E-02	6.39E-02	6.39E-02	8.71E-02	8.71E-02
Nitrate	4.79E-01	mg/L	9.50E-02	mg/kg	9.11E-01	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Nitrate/Nitrite	5.55E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E+00	mg/kg	1.00E+00			3.00E-01	NA	8.18E+00	8.18E+00	1.11E-01	1.11E-01
Selenium	0.00E+00	mg/L	7.51E-01	mg/kg	1.98E+00	mg/kg	1.00E+00	2.05E+02	4.50E+00	7.72E-01	4.92E-01	5.42E-01	5.42E-01	1.51E-01	1.51E-01
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.46E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Sulfate	5.14E+00	mg/L	1.39E+01	mg/kg	1.16E+02	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Thallium	0.00E+00	mg/L	6.14E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.82E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Vanadium	2.64E-02	mg/L	0.00E+00	mg/kg	2.38E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03
Zinc	0.00E+00	mg/L	3.22E+01	mg/kg	7.04E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	4.90E+00	1.05E+00	7.47E-01	7.47E-01	1.84E-01	1.84E-01

Chemical	EED Surface Water (mg/kg-d)	EED Sediment (mg/kg-d)	EED Soil (mg/kg-d)	EED Fish (mg/kg-d)	EED Aq. Invert. (mg/kg-d)	EED Terr. Invert. (mg/kg-d)	EED Aq. Plants (mg/kg-d)	EED Terr. Plants (mg/kg-d)	EED Plant Roots (mg/kg-d)	EED Mammals (mg/kg-d)	EED Birds (mg/kg-d)	Total EED (mg/kg-d)	NOAEL (mg/kg-d)	EEQ N	LOAEL (mg/kg-d)	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	2.29E-10	9.15E-10	0.00E+00	2.793E-06	1.64E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.20E-10	2.81E-06	1.00E-06	2.81E+00	1.00E-05	2.81E-01	17.17%	16.86%
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.31E-07	8.31E-07	8.00E-01	1.04E-06	4.00E+00	2.08E-07	0.00%	0.00%
4,4'-DDE	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.48E-06	8.48E-06	8.00E-01	1.06E-05	4.00E+00	2.12E-06	0.00%	0.00%
4,4'-DDT	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.79E-06	2.79E-06	8.00E-01	3.48E-06	4.00E+00	6.97E-07	0.00%	0.00%
Aldrin	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.62E-07	7.62E-07	2.00E-01	3.81E-06	1.00E+00	7.62E-07	0.00%	0.00%
alpha-Chlordane	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.08E-07	7.08E-07	4.58E+00	1.55E-07	9.16E+00	7.73E-08	0.00%	0.00%
Aluminum	8.93E-02	1.32E+00	0.00E+00	0.2025714	2.29E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.94E-02	2.46E+01	1.93E+00	1.27E+01	1.93E+01	1.27E+00	77.79%	76.37%
Antimony	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.66E-04	1.66E-04	1.25E-01	1.33E-03	1.25E+00	1.33E-04	0.01%	0.01%
Aroclor 1242	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.25E-06	3.25E-06	6.85E-02	4.75E-05	6.85E-01	4.75E-06	0.00%	0.00%
Aroclor 1248	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.03E-07	7.03E-07	6.80E-02	1.03E-05	6.90E-01	1.02E-06	0.00%	0.00%
Aroclor 1254	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E-05	1.36E-05	6.80E-02	2.00E-04	6.90E-01	1.97E-05	0.00%	0.00%
Aroclor 1260	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.55E-05	1.55E-05	6.80E-02	2.28E-04	6.90E-01	2.25E-05	0.00%	0.00%
Aroclor 1268	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.90E-01	0.00E+00	0.00%	0.00%
Barium	0.00E+00	1.93E-02	0.00E+00	0	3.35E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-01	5.10E+00	6.94E-02	1.98E+01	1.79E-02	0.42%	1.07%
Benzoic Acid	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	4.48E-05	7.49E-05	0.00E+00	0.0271349	1.73E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.60E-04	2.76E-02	1.00E+00	2.76E-02	1.00E+01	2.76E-03	0.17%	0.17%
Chlordane	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.80E-08	8.80E-08	4.58E+00	1.92E-08	9.16E+00	9.61E-09	0.00%	0.00%
Chromium	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.23E-04	9.23E-04	3.28E+00	2.81E-04	1.31E+01	7.02E-05	0.00%	0.00%
cis-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E-07	1.52E-07	4.58E+00	3.33E-08	9.16E+00	1.66E-08	0.00%	0.00%
Copper	2.00E-04	1.01E-03	0.00E+00	0.1172962	6.06E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.92E-04	1.26E-01	1.17E+01	1.07E-02	1.51E+01	8.29E-03	0.07%	0.50%
Dieldrin	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.54E-07	1.54E-07	2.00E-02	7.68E-06	2.00E-01	7.68E-07	0.00%	0.00%
Endrin	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.53E-07	2.53E-07	9.20E-02	2.75E-06	9.20E-01	2.75E-07	0.00%	0.00%
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.98E-06	2.98E-06	4.58E+00	6.51E-07	9.16E+00	3.25E-07	0.00%	0.00%
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.03E-07	1.03E-07	1.00E-01	1.03E-06	1.00E+00	1.03E-07	0.00%	0.00%
Hexachlorobenzene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.50E-08	8.50E-08	8.00E-02	1.06E-06	2.90E-01	2.93E-07	0.00%	0.00%
HMX	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	8.97E-02	0.00E+00	0.00E+00	11.834088	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.76E-02	1.19E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	9.99E-06	0.00E+00	0	1.79E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.89E-04	NA	NA	NA	NA	NA	NA
Lead	8.79E-05	0.00E+00	0.00E+00	0.0207722	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	4.76E-04	2.13E-02	8.00E+00	2.67E-03	8.00E+01	2.67E-04	0.02%	0.02%
Manganese	6.80E-03	0.00E+00	0.00E+00	0.8974769	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.04E-01	8.80E+01	1.03E-02	2.84E+02	3.18E-03	0.06%	0.19%
Mercury (inorganic)	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	2.63E-05	2.63E-05	1.00E+00	2.63E-05	3.00E+00	8.77E-06	0.00%	0.00%
Mercury (methyl)	0.00E+00	1.37E-05	0.00E+00	0	5.97E-05	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	7.34E-05	1.50E-02	4.89E-03	2.50E-02	2.94E-03	0.03%	0.18%
Mirex	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	7.00E-01	0.00E+00	0.00%	0.00%
Nickel	0.00E+00	1.33E-03	0.00E+00	0	2.49E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.57E-04	4.27E-03	4.00E+01	1.07E-04	8.00E+01	5.34E-05	0.00%	0.00%
Nitrate	1.03E-02	1.56E-05	0.00E+00	1.6333972	2.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.36E-05	1.64E+00	5.07E+02	3.24E-03	1.13E+03	1.45E-03	0.02%	0.09%
Nitrate/Nitrite	1.19E-03	0.00E+00	0.00E+00	0.1892839	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E-01	5.07E+02	3.76E-04	1.13E+03	1.69E-04	0.00%	0.01%
Oxychlordane	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.81E-07	2.81E-07	2.40E-01	1.17E-06	2.40E+00	1.17E-07	0.00%	0.00%
Pentachlorophenol	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	1.48E-04	1.48E-04	8.50E+00	1.74E-05	2.55E+01	5.79E-06	0.00%	0.00%
Selenium	0.00E+00	1.23E-04	0.00E+00	0	2.13E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.88E-04	2.44E-03	2.00E-01	1.22E-02	3.30E-01	7.39E-03	0.07%	0.44%
Silver	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.72E-03	1.72E-03	2.63E+02	6.53E-06	7.89E+02	2.18E-06	0.00%	0.00%
Sulfate	1.10E-01	2.27E-03	0.00E+00	17.513023	3.67E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.12E-03	1.76E+01	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	1.01E-04	0.00E+00	0	1.74E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.84E-03	7.40E-03	2.49E-01	7.40E-02	2.49E-02	1.52%	1.49%
trans-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.55E-07	1.55E-07	4.58E+00	3.39E-08	9.16E+00	1.70E-08	0.00%	0.00%
Vanadium	5.67E-04	0.00E+00	0.00E+00	0.0900002	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.23E-05	9.06E-02	2.10E-01	4.32E-01	2.10E+00	4.32E-02	2.64%	2.59%
Zinc	0.00E+00	5.27E-03	0.00E+00	0	3.93E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.16E-03	5.27E-02	1.60E+02	3.29E-04	3.20E+02	1.65E-04	0.00%	0.01%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.9E-06	5.5E-07	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	1.5E-05	3.0E-06	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	4.9E-04	4.8E-05	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	1.4E-05	1.8E-06	0.00%	0.00%

Intake Equation:

$$E_j = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IR_i x C_{ij}}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.9	unitless
Aq. Invert diet fraction =	0.05	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0.05	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0.00494	kg/d
Food ingestion rate =	0.38	kg/d
Body weight =	8	kg
Home range =	988	acres
Water intake rate =	0.648	L/d
Site Area =	262	acres
Area Use Factor (AUF) =	0.265182	unitless
Exposure Duration (ED) =	1	unitless

Table E-41
Tier 1 COPCs
EEQs and Hazard Indices for the Townsend's Big-Eared Bat at LHAAP
Industrial Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							----------Unitless----------									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	1.22E-08	mg/L	8.87E-06	mg/kg	9.34E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	1.93E-09	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	3.18E-09	0.00E+00	0.00E+00	0.00E+00	5.10E-09	1.00E-06	5.10E-03	1.00E-05	5.10E-04	0.21%	0.08%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.77E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.06E-05	0.00E+00	0.00E+00	0.00E+00	1.06E-05	8.00E-01	1.32E-05	4.00E+00	2.65E-06	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.82E-02	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	8.45E-04	0.00E+00	0.00E+00	0.00E+00	8.45E-04	8.00E-01	1.06E-03	4.00E+00	2.11E-04	0.04%	0.03%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	6.08E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	3.64E-05	0.00E+00	0.00E+00	0.00E+00	3.64E-05	8.00E-01	4.55E-05	4.00E+00	9.10E-06	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.50E-03	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	7.62E-07	0.00E+00	0.00E+00	0.00E+00	7.62E-07	2.00E-01	3.81E-06	1.00E+00	7.62E-07	0.00%	0.00%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.08E-03	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	6.28E-06	0.00E+00	0.00E+00	0.00E+00	6.28E-06	4.58E+00	1.37E-06	9.16E+00	6.85E-07	0.00%	0.00%
Aluminum	6.11E+00	mg/L	9.69E+03	mg/kg	7.38E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	9.65E-01	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.27E+00	0.00E+00	0.00E+00	0.00E+00	2.24E+00	1.93E+00	1.16E+00	1.93E+01	1.16E-01	47.86%	18.19%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E+00	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.32E-02	0.00E+00	0.00E+00	0.00E+00	1.32E-02	1.25E-01	1.06E-01	1.25E+00	1.06E-02	4.37%	1.66%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	6.94E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	8.48E-05	0.00E+00	0.00E+00	0.00E+00	8.48E-05	6.85E-02	1.24E-03	6.85E-01	1.24E-04	0.05%	0.02%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.45E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.10E-06	0.00E+00	0.00E+00	0.00E+00	1.10E-06	6.80E-02	1.62E-05	6.80E-01	1.62E-06	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	5.66E-02	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	3.75E-05	0.00E+00	0.00E+00	0.00E+00	3.75E-05	6.80E-02	5.51E-04	6.80E-01	5.51E-05	0.02%	0.01%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.69E-02	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	5.76E-06	0.00E+00	0.00E+00	0.00E+00	5.76E-06	6.80E-02	8.47E-05	6.80E-01	8.47E-06	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.80E-01	0.00E+00	0.00%	0.00%
Barium	0.00E+00	mg/L	1.32E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E+00	0.00E+00	1.98E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	2.49E-03	mg/L	5.48E-01	mg/kg	4.03E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.52E+01	8.11E-01	9.31E-01	9.31E-01	9.22E-01	9.22E-01	3.93E-04	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	2.81E-02	0.00E+00	0.00E+00	0.00E+00	2.85E-02	1.00E+00	2.85E-02	1.00E+01	2.85E-03	1.18%	0.45%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.84E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	5.55E-07	0.00E+00	0.00E+00	0.00E+00	5.55E-07	4.58E+00	1.21E-07	9.16E+00	6.06E-08	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.82E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	6.53E-01	0.00E+00	0.00E+00	0.00E+00	6.53E-01	3.28E+00	1.99E-01	1.31E+01	4.97E-02	8.22%	7.80%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.40E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.03E-06	0.00E+00	0.00E+00	0.00E+00	1.03E-06	4.58E+00	2.24E-07	9.16E+00	1.12E-07	0.00%	0.00%
Copper	1.18E-02	mg/L	7.20E+00	mg/kg	1.87E+01	mg/kg	1.00E+00	5.92E+03	5.25E+00	6.54E-01	5.86E-01	3.28E-01	3.28E-01	1.49E-01	1.49E-01	1.86E-03	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	4.58E-01	0.00E+00	0.00E+00	0.00E+00	4.60E-01	1.17E+01	3.93E-02	1.51E+01	3.04E-02	1.62%	4.77%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.29E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	4.04E-05	0.00E+00	0.00E+00	0.00E+00	4.04E-05	2.00E-02	2.02E-03	2.00E-01	2.02E-04	0.08%	0.03%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.80E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.09E-06	0.00E+00	0.00E+00	0.00E+00	1.09E-06	9.20E-02	1.18E-05	9.20E-01	1.18E-06	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	9.74E-03	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	2.94E-05	0.00E+00	0.00E+00	0.00E+00	2.94E-05	4.58E+00	6.41E-06	9.16E+00	3.21E-06	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.11E-04	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	2.51E-07	0.00E+00	0.00E+00	0.00E+00	2.51E-07	1.00E-01	2.51E-06	1.00E+00	2.51E-07	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.77E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	2.50E-07	0.00E+00	0.00E+00	0.00E+00	2.50E-07	8.00E-02	3.13E-06	2.90E-01	8.63E-07	0.00%	0.00%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	5.98E+00	mg/L	0.00E+00	mg/kg	1.68E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	9.44E-01	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	5.04E+00	0.00E+00	0.00E+00	0.00E+00	5.98E+00	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	5.18E-03	mg/L	0.00E+00	mg/kg	7.30E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	3.59E-01	NA	4.00E-02	4.00E-02	1.33E-02	1.33E-02	8.18E-04	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	NA	2.19E-01	0.00E+00	0.00E+00	0.00E+00	2.20E-01	8.00E+00	2.75E-02	8.00E+01	2.75E-03	1.13%	0.43%
Manganese	4.54E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+03	2.10E+00	NA	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	7.17E-02	0.00E+00	0.00E+00	0	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.17E-02	8.80E+01	8.15E-04	2.84E+02	2.53E-04	0.03%	0.04%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	7.96E-01	mg/kg	1.00E+00		2.87E+00	1.26E+00	NA	4.09E-01	4.09E-01	1.03E-01	1.03E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	NA	2.43E-02	0.00E+00	0.00E+00	0.00E+00	2.43E-02	1.32E+01	1.84E-03	3.96E+01	6.15E-04	0.08%	0.10%
Mercury (methyl)	0.00E+00	mg/L	9.58E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.08E+00	NA	NA			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	3.20E-02	0.00E+00	1.60E-01	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	7.00E-01	0.00E+00	0.00%	0.00%
Nickel	0.00E+00	mg/L	9.33E+00	mg/kg	8.88E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	6.21E-02	6.29E-02	6.29E-02	1.01E-01	1.01E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	4.18E-02	0.00E+00	0.00E+00	0.00E+00	4.18E-02	4.00E+01	1.05E-03	8.00E+01	5.23E-04	0.04%	0.08%
Nitrate	8.67E-01	mg/L	1.30E-01	mg/kg	1.12E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	1.37E-01	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	2.93E-02	0.00E+00	0.00E+00	0.00E+00	1.66E-01	5.07E+02	3.28E-04	1.13E+03	1.47E-04	0.01%	0.02%
Nitrate/Nitrite	7.06E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03								1.11E-02	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E-02	5.07E+02	2.20E-05	1.13E+03	9.87E-06	0.00%	0.00%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	7.16E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.79E-06	0.00E+00	0.00E+00	0.00E+00	1.79E-06	2.40E-01	7.48E-06	2.40E+00	7.48E-07	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	3.62E+00	mg/kg	1.00E+00			1.14E+00	NA	6.57E+00	6.57E+00	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	NA	1.78E+00	0.00E+00	0.00E+00	0.00E+00	1.78E+00	8.50E+00	2.09E-01	2.55E+01	6.97E-02	8.64%	10.94%
Selenium	0.00E+00	mg/L	8.67E-01	mg/kg	2.63E+00	mg/kg	1.00E+00	2.05E+02	4.50E+00	7.15E-01	4.99E-01	5.58E-01	5.58E-01	1.95E-01	1.95E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.10E-01	0.00E+00	0.00E+00	0.00E+00	1.10E-01	2.00E-01	5.49E-01	3.30E-01	3.33E-01	22.68%	52.23%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.65E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	6.94E-01	0.00E+00	0.00E+00	0.00E+00	6.94E-01	2.63E+02	2.64E-03	7.89E+02	8.80E-04	0.11%	0.14%
Sulfate	6.09E+00	mg/L	2.00E+01	mg/kg	1.75E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	9.62E-01	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	4.59E+00	0.00E+00	0.00E+00	0.00E+00	5.56E+00	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	7.12E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00							0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.40E-03	0.00E+00	7.40E-02	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.59E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.08E-06	0.00E+00	0.00E+00	0.00E+00	1.08E-06	4.58E+00	2.36E-07	9.16E+00	1.18E-07	0.00%	0.00%
Vanadium	3.33E-02	mg/L	0.00E+00	mg/kg	2.54E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	5.26E-03	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	7.60E-03	0.00E+00	0.00E+00	0.00E+00	1.29E-02	2.10E-01	6.12E-02	2.10E+00	6.12E-03	2.53%	0.96%
Zinc	0.00E+00	mg/L	3.82E+01	mg/kg	7.62E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	4.65E+00	9.78E-01	7.21E-01	7.21E-01	4.51E-01	4.51E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	4.11E+00	0.00E+00	0.00E+00	0.00E+00	4.11E+00	1.60E+02	2.57E-02	3.20E+02	1.29E-02	1.06%	2.02%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.1E-05	4.4E-06	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	1.1E-03	2.2E-04	0.05%	0.03%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.9E-03	1.9E-04	0.08%	0.03%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	2.0E-03	2.0E-04	0.08%	0.03%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi x Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	1	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.000711	kg/d
Body weight =	0.0095	kg
Home range =	1310	acres
Water intake rate =	0.0015	L/d
Site Area =	2330	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-42
Tier 2 COPCs
EEQs and Hazard Indices for the Townsend's Big-Eared Bat at LHAAP
Industrial Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
							-----Unitless-----								
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01
2,3,7,8-TCDD TEQ	1.07E-08	mg/L	5.59E-06	mg/kg	7.39E-06	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.51E-03	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E-02	mg/kg	1.00E+00		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	4.99E-03	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.38E-03	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.28E-03	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Aluminum	4.16E+00	mg/L	8.09E+03	mg/kg	7.05E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E+00	mg/kg	1.00E+00			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	5.90E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.27E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.34E-02	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.47E-02	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01
Cadmium	2.09E-03	mg/L	4.57E-01	mg/kg	3.79E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	2.60E+01	8.80E-01	9.58E-01	9.58E-01	6.72E-01	6.72E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.60E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.76E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Copper	9.31E-03	mg/L	6.17E+00	mg/kg	1.76E+01	mg/kg	1.00E+00	1.11E+03	1.56E+00	6.85E-01	6.44E-01	3.40E-01	3.40E-01	8.97E-02	8.97E-02
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.78E-04	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.31E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-03	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	1.86E-04	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.54E-04	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01
Iron	4.18E+00	mg/L	0.00E+00	mg/kg	1.59E+04	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E+01	1.39E+01	1.39E+01		
Lead	4.09E-03	mg/L	0.00E+00	mg/kg	6.49E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	3.67E-01	NA	4.22E-02	4.22E-02	1.16E-02	1.16E-02
Manganese	3.17E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.50E+02	4.20E-01	NA	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	4.57E-01	mg/kg	1.00E+00		1.14E+00	1.83E+00	NA	5.28E-01	5.28E-01	9.15E-02	9.15E-02
Mercury (methyl)	0.00E+00	mg/L	8.35E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	1.15E+00	NA	NA		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01
Nickel	0.00E+00	mg/L	8.12E+00	mg/kg	8.33E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	6.43E-02	6.39E-02	6.39E-02	8.71E-02	8.71E-02
Nitrate	4.79E-01	mg/L	9.50E-02	mg/kg	9.11E-01	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Nitrate/Nitrite	5.55E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E+00	mg/kg	1.00E+00			3.00E-01	NA	8.18E+00	8.18E+00	1.11E-01	1.11E-01
Selenium	0.00E+00	mg/L	7.51E-01	mg/kg	1.98E+00	mg/kg	1.00E+00	2.05E+02	4.50E+00	7.72E-01	4.92E-01	5.42E-01	5.42E-01	1.51E-01	1.51E-01
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.46E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Sulfate	5.14E+00	mg/L	1.39E+01	mg/kg	1.16E+02	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Thallium	0.00E+00	mg/L	6.14E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.82E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Vanadium	2.64E-02	mg/L	0.00E+00	mg/kg	2.38E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03
Zinc	0.00E+00	mg/L	3.22E+01	mg/kg	7.04E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	4.90E+00	1.05E+00	7.47E-01	7.47E-01	1.84E-01	1.84E-01

Chemical	EED Surface Water (mg/kg-d)	EED Sediment (mg/kg-d)	EED Soil (mg/kg-d)	EED Fish (mg/kg-d)	EED Aq. Invert. (mg/kg-d)	EED Terr. Invert. (mg/kg-d)	EED Aq. Plants (mg/kg-d)	EED Terr. Plants (mg/kg-d)	EED Plant Roots (mg/kg-d)	EED Mammals (mg/kg-d)	EED Birds (mg/kg-d)	Total EED (mg/kg-d)	NOAEL (mg/kg-d)	EEQ N	LOAEL (mg/kg-d)	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	9.99E-10	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.27E-09	0.00E+00	0.00E+00	0.00E+00	2.27E-09	1.00E-06	2.27E-03	1.00E-05	2.27E-04	0.25%	0.09%
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.87E-06	0.00E+00	0.00E+00	0.00E+00	1.87E-06	8.00E-01	2.34E-06	4.00E+00	4.68E-07	0.00%	0.00%
4,4'-DDE	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	8.62E-05	0.00E+00	0.00E+00	0.00E+00	8.62E-05	8.00E-01	1.08E-04	4.00E+00	2.16E-05	0.01%	0.01%
4,4'-DDT	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	6.20E-06	0.00E+00	0.00E+00	0.00E+00	6.20E-06	8.00E-01	7.75E-06	4.00E+00	1.55E-06	0.00%	0.00%
Aldrin	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	2.98E-07	0.00E+00	0.00E+00	0.00E+00	2.98E-07	2.00E-01	1.49E-06	1.00E+00	2.98E-07	0.00%	0.00%
alpha-Chlordane	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	5.31E-07	0.00E+00	0.00E+00	0.00E+00	5.31E-07	4.58E+00	1.16E-07	9.16E+00	5.80E-08	0.00%	0.00%
Aluminum	3.89E-01	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	4.69E-01	0.00E+00	0.00E+00	0.00E+00	8.58E-01	1.93E+00	4.45E-01	1.93E+01	4.45E-02	48.42%	17.31%
Antimony	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	3.91E-03	0.00E+00	0.00E+00	0.00E+00	3.91E-03	1.25E-01	3.13E-02	1.25E+00	3.13E-03	3.41%	1.22%
Aroclor 1242	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	2.19E-06	0.00E+00	0.00E+00	0.00E+00	2.19E-06	6.85E-02	3.20E-05	6.85E-01	3.20E-06	0.00%	0.00%
Aroclor 1248	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	4.74E-07	0.00E+00	0.00E+00	0.00E+00	4.74E-07	6.80E-02	6.97E-06	6.80E-01	6.97E-07	0.00%	0.00%
Aroclor 1254	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	6.88E-06	0.00E+00	0.00E+00	0.00E+00	6.88E-06	6.80E-02	1.01E-04	6.80E-01	1.01E-05	0.01%	0.00%
Aroclor 1260	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	4.20E-07	0.00E+00	0.00E+00	0.00E+00	4.20E-07	6.80E-02	6.18E-06	6.80E-01	6.18E-07	0.00%	0.00%
Aroclor 1268	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.80E-01	0.00E+00	0.00%	0.00%
Barium	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E+00	0.00E+00	1.98E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	1.95E-04	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.61E-02	0.00E+00	0.00E+00	0.00E+00	1.63E-02	1.00E+00	1.63E-02	1.00E+01	1.63E-03	1.77%	0.63%
Chlordane	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	6.60E-08	0.00E+00	0.00E+00	0.00E+00	6.60E-08	4.58E+00	1.44E-08	9.16E+00	7.21E-09	0.00%	0.00%
Chromium	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	3.15E-02	0.00E+00	0.00E+00	0.00E+00	3.15E-02	3.28E+00	9.61E-03	1.31E+01	2.40E-03	1.05%	0.93%
cis-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.14E-07	0.00E+00	0.00E+00	0.00E+00	1.14E-07	4.58E+00	2.49E-08	9.16E+00	1.25E-08	0.00%	0.00%
Copper	8.72E-04	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	2.65E-01	0.00E+00	0.00E+00	0.00E+00	2.66E-01	1.17E+01	2.27E-02	1.51E+01	1.76E-02	2.48%	6.84%
Dieldrin	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	2.96E-07	0.00E+00	0.00E+00	0.00E+00	2.96E-07	2.00E-02	1.48E-05	2.00E-01	1.48E-06	0.00%	0.00%
Endrin	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	4.03E-07	0.00E+00	0.00E+00	0.00E+00	4.03E-07	9.20E-02	4.38E-06	9.20E-01	4.38E-07	0.00%	0.00%
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	2.23E-06	0.00E+00	0.00E+00	0.00E+00	2.23E-06	4.58E+00	4.88E-07	9.16E+00	2.44E-07	0.00%	0.00%
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	9.53E-08	0.00E+00	0.00E+00	0.00E+00	9.53E-08	1.00E-01	9.53E-07	1.00E+00	9.53E-08	0.00%	0.00%
Hexachlorobenzene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.09E-07	0.00E+00	0.00E+00	0.00E+00	1.09E-07	8.00E-02	1.36E-06	2.90E-01	3.74E-07	0.00%	0.00%
HMX	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	3.91E-01	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	2.82E+00	0.00E+00	0.00E+00	0.00E+00	3.21E+00	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	3.83E-04	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	NA	1.21E-01	0.00E+00	0.00E+00	0.00E+00	1.22E-01	8.00E+00	1.52E-02	8.00E+01	1.52E-03	1.66%	0.59%
Manganese	2.96E-02	0.00E+00	0.00E+00	0	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.96E-02	8.80E+01	3.37E-04	2.84E+02	1.04E-04	0.04%	0.04%
Mercury (inorganic)	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	NA	1.07E-02	0.00E+00	0.00E+00	0.00E+00	1.07E-02	1.32E+01	8.10E-04	3.96E+01	2.70E-04	0.09%	0.11%
Mercury (methyl)	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	3.20E-02	0.00E+00	1.60E-01	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	7.00E-01	0.00E+00	0.00%	0.00%
Nickel	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	2.36E-02	0.00E+00	0.00E+00	0.00E+00	2.36E-02	4.00E+01	5.91E-04	8.00E+01	2.95E-04	0.06%	0.12%
Nitrate	4.48E-02	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	8.49E-03	0.00E+00	0.00E+00	0.00E+00	5.33E-02	5.07E+02	1.05E-04	1.13E+03	4.72E-05	0.01%	0.02%
Nitrate/Nitrite	5.20E-03	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.20E-03	5.07E+02	1.02E-05	1.13E+03	4.60E-06	0.00%	0.00%
Oxychlordane	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	6.19E-07	0.00E+00	0.00E+00	0.00E+00	6.19E-07	2.40E-01	2.58E-06	2.40E+00	2.58E-07	0.00%	0.00%
Pentachlorophenol	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	NA	7.68E-01	0.00E+00	0.00E+00	0.00E+00	7.68E-01	8.50E+00	9.04E-02	2.55E+01	3.01E-02	9.85%	11.73%
Selenium	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	4.76E-02	0.00E+00	0.00E+00	0.00E+00	4.76E-02	2.00E-01	2.38E-01	3.30E-01	1.44E-01	25.95%	56.23%
Silver	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	2.29E-01	0.00E+00	0.00E+00	0.00E+00	2.29E-01	2.63E+02	8.72E-04	7.89E+02	2.91E-04	0.09%	0.11%
Sulfate	4.81E-01	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.09E+00	0.00E+00	0.00E+00	0.00E+00	1.57E+00	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.40E-03	0.00E+00	7.40E-02	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.17E-07	0.00E+00	0.00E+00	0.00E+00	1.17E-07	4.58E+00	2.55E-08	9.16E+00	1.27E-08	0.00%	0.00%
Vanadium	2.47E-03	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	3.81E-03	0.00E+00	0.00E+00	0.00E+00	6.28E-03	2.10E-01	2.99E-02	2.10E+00	2.99E-03	3.26%	1.16%
Zinc	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	2.33E+00	0.00E+00	0.00E+00	0.00E+00	2.33E+00	1.60E+02	1.46E-02	3.20E+02	7.29E-03	1.59%	2.84%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.6E-06	4.3E-07	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	1.2E-04	2.4E-05	0.01%	0.01%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.5E-04	1.5E-05	0.02%	0.01%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	2.1E-05	2.2E-06	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi x Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	1	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.000711	kg/d
Body weight =	0.0095	kg
Home range =	3930	acres
Water intake rate =	0.0015	L/d
Site Area =	2330	acres
Area Use Factor (AUF) =	0.5928753	unitless
Exposure Duration (ED) =	1	unitless

Table E-43
Tier 1 COPCs
EEQs and Hazard Indices for the Snapping Turtle at LHAAP
Industrial Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
								-----Unitless-----							
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00
2,3,7,8-TCDD TEQ	1.22E-08	mg/L	8.87E-06	mg/kg	9.34E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.77E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.82E-02	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	6.08E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.50E-03	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.08E-03	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Aluminum	6.11E+00	mg/L	9.69E+03	mg/kg	7.38E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E+00	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	6.94E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.45E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	5.66E-02	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.69E-02	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00
Barium	0.00E+00	mg/L	1.32E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00
Cadmium	2.49E-03	mg/L	5.48E-01	mg/kg	4.03E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.52E+01	8.11E-01	9.31E-01	8.11E-01	9.22E-01	9.22E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.84E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.82E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.40E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Copper	1.18E-02	mg/L	7.20E+00	mg/kg	1.87E+01	mg/kg	1.00E+00	5.92E+03	5.25E+00	6.54E-01	5.86E-01	3.28E-01	5.86E-01	1.49E-01	1.49E-01
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.29E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.80E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	9.74E-03	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.11E-04	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.77E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00
Iron	5.98E+00	mg/L	0.00E+00	mg/kg	1.68E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01		
Lead	5.18E-03	mg/L	0.00E+00	mg/kg	7.30E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	3.59E-01	NA	4.00E-02	NA	1.33E-02	1.33E-02
Manganese	4.54E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+03	2.10E+00	NA	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	7.96E-01	mg/kg	1.00E+00		2.87E+00	1.26E+00	NA	4.09E-01	NA	1.03E-01	1.03E-01
Mercury (methyl)	0.00E+00	mg/L	9.58E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.08E+00	NA	1.08E+00		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00
Nickel	0.00E+00	mg/L	9.33E+00	mg/kg	8.88E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	6.21E-02	6.29E-02	6.21E-02	1.01E-01	1.01E-01
Nitrate	8.67E-01	mg/L	1.30E-01	mg/kg	1.12E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Nitrate/Nitrite	7.06E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	7.16E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	3.62E+00	mg/kg	1.00E+00			1.14E+00	NA	6.57E+00	6.57E+00	1.66E-01	1.66E-01
Selenium	0.00E+00	mg/L	8.67E-01	mg/kg	2.63E+00	mg/kg	1.00E+00	2.05E+02	4.50E+00	7.15E-01	4.99E-01	5.58E-01	4.99E-01	1.95E-01	1.95E-01
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.65E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Sulfate	6.09E+00	mg/L	2.00E+01	mg/kg	1.75E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Thallium	0.00E+00	mg/L	7.12E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.59E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Vanadium	3.33E-02	mg/L	0.00E+00	mg/kg	2.54E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03
Zinc	0.00E+00	mg/L	3.82E+01	mg/kg	7.62E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	4.65E+00	9.78E-01	7.21E-01	9.78E-01	4.51E-01	4.51E-01

Chemical	EED Surface Water (mg/kg-d)	EED Sediment (mg/kg-d)	EED Soil (mg/kg-d)	EED Fish (mg/kg-d)	EED Aq. Invert. (mg/kg-d)	EED Terr. Invert. (mg/kg-d)	EED Aq. Plants (mg/kg-d)	EED Terr. Plants (mg/kg-d)	EED Plant Roots (mg/kg-d)	EED Mammals (mg/kg-d)	EED Birds (mg/kg-d)	Total EED (mg/kg-d)	NOAEL (mg/kg-d)	EEQ N	LOAEL (mg/kg-d)	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDD TEQ	2.44E-10	1.41E-09	0.00E+00	3.626E-06	3.09E-08	0.00E+00	4.49E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.66E-06	NA	NA	NA	NA	NA	NA
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDE	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDT	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aldrin	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aluminum	1.22E-01	1.54E+00	0.00E+00	0.0459392	6.93E+00	0.00E+00	2.48E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.66E+00	NA	NA	NA	NA	NA	NA
Antimony	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1248	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1254	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1260	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1268	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Barium	0.00E+00	2.10E-02	0.00E+00	0	9.46E-02	0.00E+00	1.35E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.51E-01	NA	NA	NA	NA	NA	NA
Benzoic Acid	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	4.97E-05	8.70E-05	0.00E+00	0.0070874	6.96E-04	0.00E+00	4.94E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.41E-03	NA	NA	NA	NA	NA	NA
Chlordane	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Chromium	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
cis-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Copper	2.36E-04	1.14E-03	0.00E+00	0.1220987	6.01E-03	0.00E+00	4.70E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.34E-01	NA	NA	NA	NA	NA	NA
Dieldrin	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Endrin	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Iron	1.20E-01	0.00E+00	0.00E+00	10.448494	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.06E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	9.68E-06	0.00E+00	0	2.12E-04	0.00E+00	9.56E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.18E-03	NA	NA	NA	NA	NA	NA
Lead	1.04E-04	0.00E+00	0.00E+00	0.0135836	0.00E+00	0.00E+00	NA	0.00E+00	NA	0.00E+00	0.00E+00	1.37E-02	NA	NA	NA	NA	NA	NA
Manganese	9.09E-03	0.00E+00	0.00E+00	1.5887382	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.60E+00	NA	NA	NA	NA	NA	NA
Mercury (inorganic)	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Mercury (methyl)	0.00E+00	1.52E-05	0.00E+00	0	4.37E-05	NA	1.15E-04	NA	0.00E+00	0.00E+00	0.00E+00	1.74E-04	NA	NA	NA	NA	NA	NA
Mirex	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	1.48E-03	0.00E+00	0	3.44E-03	0.00E+00	6.45E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.57E-03	NA	NA	NA	NA	NA	NA
Nitrate	1.73E-02	2.06E-05	0.00E+00	1.619031	4.33E-05	0.00E+00	5.05E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.64E+00	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	1.41E-03	0.00E+00	0.00E+00	0.1318219	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E-01	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
p-Isopropyltoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Pentachloroanisole	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Pentachlorophenol	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Perchlorate	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Selenium	0.00E+00	1.38E-04	0.00E+00	0	6.20E-04	0.00E+00	4.81E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.24E-03	NA	NA	NA	NA	NA	NA
Silver	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Strontium	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Sulfate	1.22E-01	3.17E-03	0.00E+00	11.372196	6.66E-03	0.00E+00	7.77E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E+01	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	1.13E-04	0.00E+00	0	5.09E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.22E-04	NA	NA	NA	NA	NA	NA
trans-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Vanadium	6.66E-04	0.00E+00	0.00E+00	0.0621748	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.28E-02	NA	NA	NA	NA	NA	NA
Zinc	0.00E+00	6.06E-03	0.00E+00	0	4.57E-02	0.00E+00	4.15E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.33E-02	NA	NA	NA	NA	NA	NA

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	0.0E+00	0.0E+00	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	0.0E+00	0.0E+00	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi \, x \, Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0.35	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.55	unitless
Aq. Invert diet fraction =	0.05	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0.000889	kg/d
Food ingestion rate =	0.0178	kg/d
Body weight =	5.6	kg
Home range =	0.593051	acres
Water intake rate =	0.112	L/d
Site Area =	262	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-44
Tier 2 COPCs
EEQs and Hazard Indices for the Snapping Turtle at LHAAP
Industrial Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							-----	Unitless	-----							mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDD TEQ	1.07E-08	mg/L	5.59E-06	mg/kg	7.39E-06	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	2.13E-10	8.87E-10	0.00E+00	4.306E-07	4.15E-09	0.00E+00	2.41E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.36E-07	NA	NA	NA	NA	NA	NA
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.51E-03	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E-02	mg/kg	1.00E+00		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	4.99E-03	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.38E-03	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.28E-03	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aluminum	4.16E+00	mg/L	8.09E+03	mg/kg	7.05E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	8.31E-02	1.28E+00	0.00E+00	0.0312387	5.79E+00	0.00E+00	1.35E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.20E+00	NA	NA	NA	NA	NA	NA
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E+00	mg/kg	1.00E+00			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	5.90E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.27E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.34E-02	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.47E-02	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	1.87E-02	0.00E+00	0	8.44E-02	0.00E+00	2.05E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.24E-01	NA	NA	NA	NA	NA	NA
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	2.09E-03	mg/L	4.57E-01	mg/kg	3.79E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	2.60E+01	8.80E-01	9.58E-01	8.80E-01	6.72E-01	6.72E-01	4.17E-05	7.26E-05	0.00E+00	0.0041845	4.36E-05	0.00E+00	4.48E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.79E-03	NA	NA	NA	NA	NA	NA
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.60E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.76E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Copper	9.31E-03	mg/L	6.17E+00	mg/kg	1.76E+01	mg/kg	1.00E+00	1.11E+03	1.56E+00	6.85E-01	6.44E-01	3.40E-01	6.44E-01	8.97E-02	8.97E-02	1.86E-04	9.79E-04	0.00E+00	0.0180883	1.53E-03	0.00E+00	4.42E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.52E-02	NA	NA	NA	NA	NA	NA
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.78E-04	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.31E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-03	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	1.86E-04	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.54E-04	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Iron	4.18E+00	mg/L	0.00E+00	mg/kg	1.59E+04	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	8.35E-02	0.00E+00	0.00E+00	1.8249417	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.91E+00	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	9.68E-06	0.00E+00	0	4.53E-05	0.00E+00	9.43E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.98E-04	NA	NA	NA	NA	NA	NA
Lead	4.09E-03	mg/L	0.00E+00	mg/kg	6.49E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	3.67E-01	NA	4.22E-02	NA	1.16E-02	1.16E-02	8.18E-05	0.00E+00	0.00E+00	0.0032033	0.00E+00	0.00E+00	NA	0.00E+00	NA	0.00E+00	0.00E+00	3.29E-03	NA	NA	NA	NA	NA	NA
Manganese	3.17E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.50E+02	4.20E-01	NA	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	6.33E-03	0.00E+00	0.00E+00	0.1384004	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.45E-01	NA	NA	NA	NA	NA	NA
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	4.57E-01	mg/kg	1.00E+00		1.14E+00	1.83E+00	NA	5.28E-01	NA	9.15E-02	9.15E-02	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Mercury (methyl)	0.00E+00	mg/L	8.35E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	1.15E+00	NA	1.15E+00			0.00E+00	1.33E-05	0.00E+00	0	1.51E-05	NA	1.07E-04	NA	0.00E+00	0.00E+00	0.00E+00	1.35E-04	NA	NA	NA	NA	NA	NA
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	mg/L	8.12E+00	mg/kg	8.33E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	6.43E-02	6.39E-02	6.43E-02	8.71E-02	8.71E-02	0.00E+00	1.29E-03	0.00E+00	0	6.27E-04	0.00E+00	5.81E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03	NA	NA	NA	NA	NA	NA
Nitrate	4.79E-01	mg/L	9.50E-02	mg/kg	9.11E-01	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	9.58E-03	1.51E-05	0.00E+00	0.2518872	6.34E-06	0.00E+00	2.22E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.62E-01	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	5.55E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02								1.11E-03	0.00E+00	0.00E+00	0.0291896	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.03E-02	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E+00	mg/kg	1.00E+00			3.00E-01	NA	8.18E+00	8.18E+00	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Selenium	0.00E+00	mg/L	7.51E-01	mg/kg	1.98E+00	mg/kg	1.00E+00	2.05E+02	4.50E+00	7.72E-01	4.92E-01	5.42E-01	4.92E-01	1.51E-01	1.51E-01	0.00E+00	1.19E-04	0.00E+00	0	5.37E-04	0.00E+00	4.11E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E-03	NA	NA	NA	NA	NA	NA
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.46E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Sulfate	5.14E+00	mg/L	1.39E+01	mg/kg	1.16E+02	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	1.03E-01	2.20E-03	0.00E+00	2.7006937	9.27E-04	0.00E+00	3.24E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.81E+00	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	6.14E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00							0.00E+00	9.74E-05	0.00E+00	0	4.39E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.36E-04	NA	NA	NA	NA	NA	NA
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.82E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Vanadium	2.64E-02	mg/L	0.00E+00	mg/kg	2.38E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	5.28E-04	0.00E+00	0.00E+00	0.013879	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.44E-02	NA	NA	NA	NA	NA	NA
Zinc	0.00E+00	mg/L	3.22E+01	mg/kg	7.04E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	4.90E+00	1.05E+00	7.47E-01	1.05E+00	1.84E-01	1.84E-01	0.00E+00	5.11E-03	0.00E+00	0	9.91E-03	0.00E+00	3.77E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.28E-02	NA	NA	NA	NA	NA	NA

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	0.0E+00	0.0E+00	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	0.0E+00	0.0E+00	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\,x\,Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0.35	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.55	unitless
Aq. Invert diet fraction =	0.05	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0.000889	kg/d
Food ingestion rate =	0.0178	kg/d
Body weight =	5.6	kg
Home range =	11.21854	acres
Water intake rate =	0.112	L/d
Site Area =	262	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-45
Tier 1 COPCs
EEQs and Hazard Indices for the Bank Swallow at LHAAP
Industrial Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							-----Unitless-----									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.22E-01	0.00E+00	1.27E+00	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	1.22E-08	mg/L	8.87E-06	mg/kg	9.34E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	2.92E-09	2.09E-08	0.00E+00	0	8.26E-06	9.81E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.26E-06	1.40E-05	6.62E-01	1.40E-04	6.62E-02	2.84%	0.94%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.77E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.30E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E-04	2.80E-03	4.64E-02	2.80E-02	4.64E-03	0.20%	0.07%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.82E-02	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.34E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.34E-03	5.80E-02	2.31E-02	5.80E-01	2.31E-03	0.10%	0.03%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	6.08E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	4.62E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.62E-04	2.80E-03	1.65E-01	2.80E-02	1.65E-02	0.71%	0.24%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.50E-03	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.14E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.14E-04	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.08E-03	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.55E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.55E-04	2.14E+00	7.24E-05	1.07E+01	1.45E-05	0.00%	0.00%
Aluminum	6.11E+00	mg/L	9.69E+03	mg/kg	7.38E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	1.46E+00	2.28E+01	0.00E+00	0	1.86E+03	4.12E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.88E+03	1.10E+02	1.72E+01	3.29E+02	5.72E+00	73.82%	81.65%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E+00	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.36E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E-02	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	6.94E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	5.19E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.19E-04	4.10E-01	1.27E-03	1.23E+00	4.22E-04	0.01%	0.01%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.45E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.09E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E-04	1.80E-01	6.03E-04	1.80E+00	6.03E-05	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	5.66E-02	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	4.34E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.34E-03	1.80E-01	2.41E-02	1.80E+00	2.41E-03	0.10%	0.03%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.69E-02	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.36E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E-03	1.80E-01	7.58E-03	1.80E+00	7.58E-04	0.03%	0.01%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Barium	0.00E+00	mg/L	1.32E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	3.11E-01	0.00E+00	0	2.53E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.56E+01	2.08E+01	1.23E+00	4.17E+01	6.15E-01	5.30%	8.77%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E+00	0.00E+00	3.33E+00	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	2.49E-03	mg/L	5.48E-01	mg/kg	4.03E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.52E+01	8.11E-01	9.31E-01	9.31E-01	9.22E-01	9.22E-01	5.96E-04	1.29E-03	0.00E+00	0	1.86E-01	4.81E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.36E-01	1.45E+00	1.63E-01	2.00E+01	1.18E-02	0.70%	0.17%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.84E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.37E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.37E-05	2.14E+00	6.40E-06	1.07E+01	1.28E-06	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.82E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	2.72E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.72E-01	1.00E+00	2.72E-01	5.00E+00	5.43E-02	1.17%	0.77%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.40E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	2.54E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.54E-05	2.14E+00	1.18E-05	1.07E+01	2.37E-06	0.00%	0.00%
Copper	1.18E-02	mg/L	7.20E+00	mg/kg	1.87E+01	mg/kg	1.00E+00	5.92E+03	5.25E+00	6.54E-01	5.86E-01	3.28E-01	3.28E-01	1.49E-01	1.49E-01	2.83E-03	1.69E-02	0.00E+00	0	1.61E+00	5.77E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.69E+00	4.70E+01	3.59E-02	6.17E+01	2.73E-02	0.15%	0.39%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.29E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	2.37E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.37E-05	7.70E-02	3.08E-04	2.31E-01	1.03E-04	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.80E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	2.74E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.74E-05	3.00E-01	9.14E-05	9.00E-01	3.05E-05	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	9.74E-03	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	7.25E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.25E-04	2.14E+00	3.39E-04	1.07E+01	6.78E-05	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.11E-04	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.55E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.55E-05	9.20E-01	1.68E-05	2.76E+00	5.60E-06	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.77E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.30E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E-05	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Iron	5.98E+00	mg/L	0.00E+00	mg/kg	1.68E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	1.43E+00	0.00E+00	0.00E+00	0	0.00E+00	6.20E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.63E+00	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	1.44E-04	0.00E+00	0	5.68E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.69E-02	NA	NA	NA	NA	NA	NA
Lead	5.18E-03	mg/L	0.00E+00	mg/kg	7.30E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	3.59E-01	NA	4.00E-02	4.00E-02	1.33E-02	1.33E-02	1.24E-03	0.00E+00	0.00E+00	0	0.00E+00	1.24E-01	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01	1.13E+00	1.11E-01	1.13E+01	1.11E-02	0.48%	0.16%
Manganese	4.54E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+03	2.10E+00	NA	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	1.09E-01	0.00E+00	0.00E+00	0	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E-01	9.77E+02	1.11E-04	9.77E+03	1.11E-05	0.00%	0.00%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	7.96E-01	mg/kg	1.00E+00		2.87E+00	1.26E+00	NA	4.09E-01	4.09E-01	1.03E-01	1.03E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	4.74E-03	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.74E-03	4.50E-01	1.05E-02	9.00E-01	5.26E-03	0.05%	0.08%
Mercury (methyl)	0.00E+00	mg/L	9.58E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.08E+00	NA	NA			0.00E+00	2.25E-04	0.00E+00	0	1.17E-02	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	1.19E-02	6.40E-03	1.86E+00	6.40E-02	1.86E-01	8.00%	2.65%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	mg/L	9.33E+00	mg/kg	8.88E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	6.21E-02	6.29E-02	6.29E-02	1.01E-01	1.01E-01	0.00E+00	2.20E-02	0.00E+00	0	9.20E-01	1.98E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.14E+00	7.74E+01	1.47E-02	1.07E+02	1.07E-02	0.06%	0.15%
Nitrate	8.67E-01	mg/L	1.30E-01	mg/kg	1.12E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	2.08E-01	3.05E-04	0.00E+00	0	1.16E-02	6.02E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.26E-01	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	7.06E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03								1.69E-02	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.69E-02	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+02	0.00E+00	3.20E+02	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	7.16E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	5.14E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.14E-05	6.73E+00	7.64E-06	6.73E+01	7.64E-07	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E+00	0.00E+00	6.73E+01	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	3.62E+00	mg/kg	1.00E+00			1.14E+00	NA	6.57E+00	6.57E+00	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.95E-02	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.95E-02	6.50E+01	3.00E-04	1.30E+02	1.50E-04	0.00%	0.00%
Selenium	0.00E+00	mg/L	8.67E-01	mg/kg	2.63E+00	mg/kg	1.00E+00	2.05E+02	4.50E+00	7.15E-01	4.99E-01	5.58E-01	5.58E-01	1.95E-01	1.95E-01	0.00E+00	2.04E-03	0.00E+00	0	1.66E-01	8.88E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.77E-01	1.80E+00	9.82E-02	5.40E+00	3.27E-02	0.42%	0.47%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E+00	0.00E+00	5.44E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.65E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	3.48E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.48E-02	NA	NA	NA	NA	NA	NA
Sulfate	6.09E+00	mg/L	2.00E+01	mg/kg	1.75E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	1.46E+00	4.70E-02	0.00E+00	0	1.78E+00	9.45E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.23E+00	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	7.12E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00							0.00E+00	1.68E-03	0.00E+00	0	1.36E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.38E-01	3.50E-01	3.94E-01	1.05E+00	1.31E-01	1.69%	1.87%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.59E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	2.67E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.67E-05	2.14E+00	1.25E-05	1.07E+01	2.50E-06	0.00%	0.00%
Vanadium	3.33E-02	mg/L	0.00E+00	mg/kg	2.54E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	7.98E-03	0.00E+00	0.00E+00	0	0.00E+00	1.06E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.85E-02	1.14E+01	1.63E-03	3.42E+01	5.42E-04	0.01%	0.01%
Zinc	0.00E+00	mg/L	3.82E+01	mg/kg	7.62E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	4.65E+00	9.78E-01	7.21E-01	7.21E-01	4.51E-01	4.51E-01	0.00E+00	8.99E-02	0.00E+00	0	1.22E+01	1.67E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.40E+01	1.45E+01	9.65E-01	1.31E+02	1.07E-01	4.15%	1.52%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	4.6E-04	9.4E-05	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	2.3E-01	2.3E-02	1.01%	0.33%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	3.4E-02	3.6E-03	0.14%	0.05%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	4.0E-04	1.3E-04	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\,x\,Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0.9	unitless
Terr. Invert diet fraction =	0.1	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	3.44E-05	kg/d
Food ingestion rate =	0.00069	kg/d
Body weight =	0.0146	kg
Home range =	49.4	acres
Water intake rate =	0.0035	L/d
Site Area =	2330	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-46
Tier 2 COPCs
EEQs and Hazard Indices for the Bank Swallow at LHAAP
Industrial Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF (Unitless)	Fish BAF (Unitless)	Aq. Invert. BAF (Unitless)	Terr. Invert. BAF (Unitless)	Aq. Plant BAF (Unitless)	Terr. Plant BAF (Unitless)	Plant Root BAF (Unitless)	Mammal BAF (Unitless)	Bird BAF	EED Surface Water mg/kg-d	EED Sediment mg/kg-d	EED Soil mg/kg-d	EED Fish mg/kg-d	EED Aq. Invert. mg/kg-d	EED Terr. Invert. mg/kg-d	EED Aq. Plants mg/kg-d	EED Terr. Plants mg/kg-d	EED Plant Roots mg/kg-d	EED Mammals mg/kg-d	EED Birds mg/kg-d	Total EED mg/kg-d	NOAEL mg/kg-d	EEQ N	LOAEL mg/kg-d	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.22E-01	0.00E+00	1.27E+00	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	1.07E-08	mg/L	5.59E-06	mg/kg	7.39E-06	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	2.56E-09	1.32E-08	0.00E+00	0	1.11E-06	3.84E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.51E-06	1.40E-05	1.08E-01	1.40E-04	1.08E-02	0.63%	0.19%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.51E-03	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	6.37E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.37E-05	2.80E-03	2.27E-02	2.80E-02	2.27E-03	0.13%	0.04%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E-02	mg/kg	1.00E+00		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	6.07E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.07E-04	5.80E-02	1.05E-02	5.80E-01	1.05E-03	0.06%	0.02%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	4.99E-03	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	2.19E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.19E-04	2.80E-03	7.81E-02	2.80E-02	7.81E-03	0.45%	0.14%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.38E-03	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	6.05E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.05E-05	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.28E-03	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	5.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.51E-05	2.14E+00	2.58E-05	1.07E+01	5.15E-06	0.00%	0.00%
Aluminum	4.16E+00	mg/L	8.09E+03	mg/kg	7.05E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	9.96E-01	1.90E+01	0.00E+00	0	1.55E+03	1.43E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.57E+03	1.10E+02	1.43E+01	3.29E+02	4.77E+00	83.10%	84.94%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E+00	mg/kg	1.00E+00			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	3.38E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.38E-03	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	5.90E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	2.54E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.54E-04	4.10E-01	6.19E-04	1.23E+00	2.06E-04	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.27E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	5.49E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.49E-05	1.80E-01	3.05E-04	1.80E+00	3.05E-05	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.34E-02	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.92E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.92E-03	1.80E-01	1.06E-02	1.80E+00	1.06E-03	0.06%	0.02%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.47E-02	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	6.85E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.85E-04	1.80E-01	3.80E-03	1.80E+00	3.80E-04	0.02%	0.01%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	2.78E-01	0.00E+00	0	2.26E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.29E+01	2.08E+01	1.10E+00	4.17E+01	5.49E-01	6.39%	9.77%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E+00	0.00E+00	3.33E+00	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	2.09E-03	mg/L	4.57E-01	mg/kg	3.79E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	2.60E+01	8.80E-01	9.58E-01	9.58E-01	6.72E-01	6.72E-01	5.00E-04	1.08E-03	0.00E+00	0	1.17E-02	4.65E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.97E-02	1.45E+00	4.12E-02	2.00E+01	2.99E-03	0.24%	0.05%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.60E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	6.85E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.85E-06	2.14E+00	3.20E-06	1.07E+01	6.40E-07	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	2.50E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-02	1.00E+00	2.50E-02	5.00E+00	5.01E-03	0.15%	0.09%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.76E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.19E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.19E-05	2.14E+00	5.54E-06	1.07E+01	1.11E-06	0.00%	0.00%
Copper	9.31E-03	mg/L	6.17E+00	mg/kg	1.76E+01	mg/kg	1.00E+00	1.11E+03	1.56E+00	6.85E-01	6.44E-01	3.40E-01	3.40E-01	8.97E-02	8.97E-02	2.23E-03	1.45E-02	0.00E+00	0	4.09E-01	5.69E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.83E-01	4.70E+01	1.03E-02	6.17E+01	7.82E-03	0.06%	0.14%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.78E-04	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.16E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.16E-05	7.70E-02	1.50E-04	2.31E-01	5.01E-05	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.31E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.38E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.38E-05	3.00E-01	4.60E-05	9.00E-01	1.53E-05	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-03	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	2.32E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.32E-04	2.14E+00	1.08E-04	1.07E+01	2.17E-05	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	1.86E-04	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	7.86E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.86E-06	9.20E-01	8.55E-06	2.76E+00	2.85E-06	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.54E-04	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	6.51E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.51E-06	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Iron	4.18E+00	mg/L	0.00E+00	mg/kg	1.59E+04	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	1.00E+00	0.00E+00	0.00E+00	0	0.00E+00	2.70E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.70E+00	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	1.44E-04	0.00E+00	0	1.21E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.23E-02	NA	NA	NA	NA	NA	NA
Lead	4.09E-03	mg/L	0.00E+00	mg/kg	6.49E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	3.67E-01	NA	4.22E-02	4.22E-02	1.16E-02	1.16E-02	9.80E-04	0.00E+00	0.00E+00	0	0.00E+00	1.13E-01	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	1.13E+00	1.00E-01	1.13E+01	1.00E-02	0.58%	0.18%
Manganese	3.17E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.50E+02	4.20E-01	NA	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	7.59E-02	0.00E+00	0.00E+00	0	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.59E-02	9.77E+02	7.77E-05	9.77E+03	7.77E-06	0.00%	0.00%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	4.57E-01	mg/kg	1.00E+00		1.14E+00	1.83E+00	NA	5.28E-01	5.28E-01	9.15E-02	9.15E-02	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	3.95E-03	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.95E-03	4.50E-01	8.77E-03	9.00E-01	4.38E-03	0.05%	0.08%
Mercury (methyl)	0.00E+00	mg/L	8.35E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	1.15E+00	NA	NA			0.00E+00	1.96E-04	0.00E+00	0	4.03E-03	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	4.23E-03	6.40E-03	6.61E-01	6.40E-02	6.61E-02	3.84%	1.18%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	mg/L	8.12E+00	mg/kg	8.33E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	6.43E-02	6.39E-02	6.39E-02	8.71E-02	8.71E-02	0.00E+00	1.91E-02	0.00E+00	0	1.68E-01	4.17E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.29E-01	7.74E+01	2.95E-03	1.07E+02	2.14E-03	0.02%	0.04%
Nitrate	4.79E-01	mg/L	9.50E-02	mg/kg	9.11E-01	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	1.15E-01	2.24E-04	0.00E+00	0	1.70E-03	1.29E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.18E-01	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	5.55E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02								1.33E-02	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E-02	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+02	0.00E+00	3.20E+02	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	2.10E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E-05	6.73E+00	3.13E-06	6.73E+01	3.13E-07	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E+00	0.00E+00	6.73E+01	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E+00	mg/kg	1.00E+00			3.00E-01	NA	8.18E+00	8.18E+00	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	3.00E-03	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.00E-03	6.50E+01	4.62E-05	1.30E+02	2.31E-05	0.00%	0.00%
Selenium	0.00E+00	mg/L	7.51E-01	mg/kg	1.98E+00	mg/kg	1.00E+00	2.05E+02	4.50E+00	7.72E-01	4.92E-01	5.42E-01	5.42E-01	1.51E-01	1.51E-01	0.00E+00	1.77E-03	0.00E+00	0	1.44E-01	7.22E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.53E-01	1.80E+00	8.48E-02	5.40E+00	2.83E-02	0.49%	0.50%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E+00	0.00E+00	5.44E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.46E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.01E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.01E-02	NA	NA	NA	NA	NA	NA
Sulfate	5.14E+00	mg/L	1.39E+01	mg/kg	1.16E+02	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	1.23E+00	3.27E-02	0.00E+00	0	2.48E-01	1.65E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.68E+00	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	6.14E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00							0.00E+00	1.44E-03	0.00E+00	0	1.17E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.19E-01	3.50E-01	3.40E-01	1.05E+00	1.13E-01	1.97%	2.02%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.82E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.21E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.21E-05	2.14E+00	5.65E-06	1.07E+01	1.13E-06	0.00%	0.00%
Vanadium	2.64E-02	mg/L	0.00E+00	mg/kg	2.38E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	6.33E-03	0.00E+00	0.00E+00	0	0.00E+00	4.73E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E-02	1.14E+01	9.70E-04	3.42E+01	3.23E-04	0.01%	0.01%
Zinc	0.00E+00	mg/L	3.22E+01	mg/kg	7.04E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	4.90E+00	1.05E+00	7.47E-01	7.47E-01	1.84E-01	1.84E-01	0.00E+00	7.58E-02	0.00E+00	0	2.65E+00	1.63E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.36E+00	1.45E+01	3.01E-01	1.31E+02	3.33E-02	1.75%	0.59%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.6E-04	3.3E-05	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	1.1E-01	1.1E-02	0.65%	0.20%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.5E-02	1.7E-03	0.09%	0.03%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	2.0E-04	6.5E-05	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\,x\,Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0.9	unitless
Terr. Invert diet fraction =	0.1	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0.000034365	kg/d
Food ingestion rate =	0.00069	kg/d
Body weight =	0.0146	kg
Home range =	247	acres
Water intake rate =	0.0035	L/d
Site Area =	2330	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-47
Tier 1 COPCs
EEQs and Hazard Indices for the American Woodcock at LHAAP
Industrial Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL		LOAEL		Percent Contribution to	Percent Contribution to
							-----Unitless-----									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	EEQ N	mg/kg-d	EEQ L	EEQ N	EEQ L
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.22E-01	0.00E+00	1.27E+00	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	1.22E-08	mg/L	8.87E-06	mg/kg	9.34E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	1.22E-09	0.00E+00	1.20E-07	0	0.00E+00	2.56E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.57E-05	1.40E-05	1.84E+00	1.40E-04	1.84E-01	6.98%	4.53%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.77E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.27E-05	0	0.00E+00	3.39E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.41E-03	2.80E-03	1.22E+00	2.80E-02	1.22E-01	4.63%	3.01%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.82E-02	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	2.34E-04	0	0.00E+00	3.50E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.53E-02	5.80E-02	6.08E-01	5.80E-01	6.08E-02	2.31%	1.50%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	6.08E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	0.00E+00	7.81E-05	0	0.00E+00	1.21E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.21E-02	2.80E-03	4.34E+00	2.80E-02	4.34E-01	16.48%	10.70%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.50E-03	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.93E-05	0	0.00E+00	2.98E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.00E-03	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.08E-03	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.67E-05	0	0.00E+00	4.04E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.07E-03	2.14E+00	1.90E-03	1.07E+01	3.80E-04	0.01%	0.01%
Aluminum	6.11E+00	mg/L	9.69E+03	mg/kg	7.38E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	6.11E-01	0.00E+00	9.48E+01	0	0.00E+00	1.07E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.03E+02	1.10E+02	1.85E+00	3.29E+02	6.16E-01	7.02%	15.21%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E+00	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	3.24E-02	0	0.00E+00	3.55E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.88E-01	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	6.94E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	8.92E-05	0	0.00E+00	1.35E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E-02	4.10E-01	3.32E-02	1.23E+00	1.11E-02	0.13%	0.27%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.45E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.87E-05	0	0.00E+00	2.83E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.85E-03	1.80E-01	1.58E-02	1.80E+00	1.58E-03	0.06%	0.04%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	5.66E-02	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	0.00E+00	7.27E-04	0	0.00E+00	1.13E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.14E-01	1.80E-01	6.33E-01	1.80E+00	6.33E-02	2.40%	1.56%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.69E-02	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	2.17E-04	0	0.00E+00	3.56E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.58E-02	1.80E-01	1.99E-01	1.80E+00	1.99E-02	0.76%	0.49%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Barium	0.00E+00	mg/L	1.32E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.08E+01	0.00E+00	4.17E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E+00	0.00E+00	3.33E+00	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	2.49E-03	mg/L	5.48E-01	mg/kg	4.03E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.52E+01	8.11E-01	9.31E-01	9.31E-01	9.22E-01	9.22E-01	2.49E-04	0.00E+00	5.18E-03	0	0.00E+00	1.26E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.26E+00	1.45E+00	8.70E-01	2.00E+01	6.31E-02	3.30%	1.56%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.84E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.36E-06	0	0.00E+00	3.58E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.60E-04	2.14E+00	1.68E-04	1.07E+01	3.37E-05	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.82E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	0.00E+00	0.00E+00	2.33E-01	0	0.00E+00	7.09E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.32E+00	1.00E+00	7.32E+00	5.00E+00	1.46E+00	27.81%	36.12%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.40E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.37E-06	0	0.00E+00	6.62E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.66E-04	2.14E+00	3.11E-04	1.07E+01	6.22E-05	0.00%	0.00%
Copper	1.18E-02	mg/L	7.20E+00	mg/kg	1.87E+01	mg/kg	1.00E+00	5.92E+03	5.25E+00	6.54E-01	5.86E-01	3.28E-01	3.28E-01	1.49E-01	1.49E-01	1.18E-03	0.00E+00	2.40E-01	0	0.00E+00	1.51E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.75E+00	4.70E+01	3.72E-02	6.17E+01	2.83E-02	0.14%	0.70%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.29E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.22E-06	0	0.00E+00	6.20E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.24E-04	7.70E-02	8.10E-03	2.31E-01	2.70E-03	0.03%	0.07%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.80E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	4.88E-06	0	0.00E+00	7.16E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.21E-04	3.00E-01	2.40E-03	9.00E-01	8.01E-04	0.01%	0.02%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	9.74E-03	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.25E-04	0	0.00E+00	1.89E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.91E-02	2.14E+00	8.90E-03	1.07E+01	1.78E-03	0.03%	0.04%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.11E-04	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.71E-06	0	0.00E+00	4.03E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.06E-04	9.20E-01	4.41E-04	2.76E+00	1.47E-04	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.77E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.27E-06	0	0.00E+00	3.39E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.41E-04	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Iron	5.98E+00	mg/L	0.00E+00	mg/kg	1.68E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	5.98E-01	0.00E+00	2.16E+02	0	0.00E+00	1.62E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.78E+02	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	5.18E-03	mg/L	0.00E+00	mg/kg	7.30E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	3.59E-01	NA	4.00E-02	4.00E-02	1.33E-02	1.33E-02	5.18E-04	0.00E+00	9.38E-01	0	0.00E+00	3.23E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.17E+00	1.13E+00	3.69E+00	1.13E+01	3.69E-01	14.01%	9.10%
Manganese	4.54E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+03	2.10E+00	NA	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	4.54E-02	0.00E+00	0.00E+00	0	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.54E-02	9.77E+02	4.65E-05	9.77E+03	4.65E-06	0.00%	0.00%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	7.96E-01	mg/kg	1.00E+00		2.87E+00	1.26E+00	NA	4.09E-01	4.09E-01	1.03E-01	1.03E-01	0.00E+00	0.00E+00	1.02E-02	0	0.00E+00	1.24E-01	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.34E-01	4.50E-01	2.98E-01	9.00E-01	1.49E-01	1.13%	3.67%
Mercury (methyl)	0.00E+00	mg/L	9.58E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.08E+00	NA	NA			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	6.40E-03	0.00E+00	6.40E-02	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	mg/L	9.33E+00	mg/kg	8.88E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	6.21E-02	6.29E-02	6.29E-02	1.01E-01	1.01E-01	0.00E+00	0.00E+00	1.14E-01	0	0.00E+00	5.18E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.29E+00	7.74E+01	6.84E-02	1.07E+02	4.95E-02	0.26%	1.22%
Nitrate	8.67E-01	mg/L	1.30E-01	mg/kg	1.12E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	8.67E-02	0.00E+00	1.43E-02	0	0.00E+00	1.57E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.58E-01	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	7.06E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03								7.06E-03	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.06E-03	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+02	0.00E+00	3.20E+02	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	7.16E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	9.20E-06	0	0.00E+00	1.34E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.35E-03	6.73E+00	2.01E-04	6.73E+01	2.01E-05	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E+00	0.00E+00	6.73E+01	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	3.62E+00	mg/kg	1.00E+00			1.14E+00	NA	6.57E+00	6.57E+00	1.66E-01	1.66E-01	0.00E+00	0.00E+00	4.64E-02	0	0.00E+00	5.08E-01	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.55E-01	6.50E+01	8.54E-03	1.30E+02	4.27E-03	0.03%	0.11%
Selenium	0.00E+00	mg/L	8.67E-01	mg/kg	2.63E+00	mg/kg	1.00E+00	2.05E+02	4.50E+00	7.15E-01	4.99E-01	5.58E-01	5.58E-01	1.95E-01	1.95E-01	0.00E+00	0.00E+00	3.37E-02	0	0.00E+00	2.32E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.65E-01	1.80E+00	1.47E-01	5.40E+00	4.92E-02	0.56%	1.21%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E+00	0.00E+00	5.44E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.65E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	3.40E-01	0	0.00E+00	9.09E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E+00	NA	NA	NA	NA	NA	NA
Sulfate	6.09E+00	mg/L	2.00E+01	mg/kg	1.75E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	6.09E-01	0.00E+00	2.25E+00	0	0.00E+00	2.47E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.75E+01	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	7.12E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00							0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.50E-01	0.00E+00	1.05E+00	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.59E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.61E-06	0	0.00E+00	6.98E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.02E-04	2.14E+00	3.28E-04	1.07E+01	6.56E-05	0.00%	0.00%
Vanadium	3.33E-02	mg/L	0.00E+00	mg/kg	2.54E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	3.33E-03	0.00E+00	3.26E-01	0	0.00E+00	2.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.05E-01	1.14E+01	5.31E-02	3.42E+01	1.77E-02	0.20%	0.44%
Zinc	0.00E+00	mg/L	3.82E+01	mg/kg	7.62E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	4.65E+00	9.78E-01	7.21E-01	7.21E-01	4.51E-01	4.51E-01	0.00E+00	0.00E+00	9.79E-01	0	0.00E+00	4.37E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.47E+01	1.45E+01	3.08E+00	1.31E+02	3.41E-01	11.70%	8.41%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.2E-02	2.5E-03	0.05%	0.06%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	6.2E+00	6.2E-01	23.41%	15.21%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	8.8E-01	9.6E-02	3.35%	2.36%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	1.1E-02	3.5E-03	0.04%	0.09%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\,x\,Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	1	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.002529	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.0243	kg/d
Body weight =	0.197	kg
Home range =	0.74	acres
Water intake rate =	0.0197	L/d
Site Area =	2330	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-48
Tier 2 COPCs
EEQs and Hazard Indices for the American Woodcock at LHAAP
Industrial Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL		LOAEL		Percent Contribution to	Percent Contribution to
								-----Unitless-----								mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	EEQ N	mg/kg-d	EEQ L	EEQ N	EEQ L
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.22E-01	0.00E+00	1.27E+00	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	1.07E-08	mg/L	5.59E-06	mg/kg	7.39E-06	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	1.07E-09	0.00E+00	9.48E-08	0	0.00E+00	1.00E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.01E-05	1.40E-05	7.23E-01	1.40E-04	7.23E-02	5.26%	3.77%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.51E-03	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.93E-05	0	0.00E+00	1.66E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.68E-03	2.80E-03	6.01E-01	2.80E-02	6.01E-02	4.37%	3.13%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E-02	mg/kg	1.00E+00		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	1.83E-04	0	0.00E+00	1.59E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.60E-02	5.80E-02	2.76E-01	5.80E-01	2.76E-02	2.01%	1.44%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	4.99E-03	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	6.40E-05	0	0.00E+00	5.71E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.77E-03	2.80E-03	2.06E+00	2.80E-02	2.06E-01	15.00%	10.75%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.38E-03	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.77E-05	0	0.00E+00	1.58E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.60E-03	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.28E-03	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.65E-05	0	0.00E+00	1.44E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.46E-03	2.14E+00	6.80E-04	1.07E+01	1.36E-04	0.00%	0.01%
Aluminum	4.16E+00	mg/L	8.09E+03	mg/kg	7.05E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	4.16E-01	0.00E+00	9.05E+01	0	0.00E+00	3.74E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E+02	1.10E+02	1.17E+00	3.29E+02	3.90E-01	8.50%	20.32%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E+00	mg/kg	1.00E+00			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	3.06E-02	0	0.00E+00	8.82E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.19E-01	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	5.90E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	7.57E-05	0	0.00E+00	6.63E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.70E-03	4.10E-01	1.64E-02	1.23E+00	5.45E-03	0.12%	0.28%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.27E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.64E-05	0	0.00E+00	1.43E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.45E-03	1.80E-01	8.05E-03	1.80E+00	8.05E-04	0.06%	0.04%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.34E-02	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	5.57E-04	0	0.00E+00	5.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.05E-02	1.80E-01	2.81E-01	1.80E+00	2.81E-02	2.04%	1.46%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.47E-02	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	1.89E-04	0	0.00E+00	1.79E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.81E-02	1.80E-01	1.00E-01	1.80E+00	1.00E-02	0.73%	0.52%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.08E+01	0.00E+00	4.17E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E+00	0.00E+00	3.33E+00	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	2.09E-03	mg/L	4.57E-01	mg/kg	3.79E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	2.60E+01	8.80E-01	9.58E-01	9.58E-01	6.72E-01	6.72E-01	2.09E-04	0.00E+00	4.86E-03	0	0.00E+00	1.21E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.22E+00	1.45E+00	8.40E-01	2.00E+01	6.09E-02	6.11%	3.18%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.60E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.05E-06	0	0.00E+00	1.79E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.81E-04	2.14E+00	8.45E-05	1.07E+01	1.69E-05	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	0.00E+00	0.00E+00	2.22E-01	0	0.00E+00	6.54E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.76E-01	1.00E+00	8.76E-01	5.00E+00	1.75E-01	6.37%	9.14%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.76E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.54E-06	0	0.00E+00	3.09E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.13E-04	2.14E+00	1.46E-04	1.07E+01	2.92E-05	0.00%	0.00%
Copper	9.31E-03	mg/L	6.17E+00	mg/kg	1.76E+01	mg/kg	1.00E+00	1.11E+03	1.56E+00	6.85E-01	6.44E-01	3.40E-01	3.40E-01	8.97E-02	8.97E-02	9.31E-04	0.00E+00	2.25E-01	0	0.00E+00	1.48E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.71E+00	4.70E+01	3.64E-02	6.17E+01	2.77E-02	0.26%	1.45%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.78E-04	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.57E-06	0	0.00E+00	3.02E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.06E-04	7.70E-02	3.97E-03	2.31E-01	1.32E-03	0.03%	0.07%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.31E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	4.26E-06	0	0.00E+00	3.60E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.64E-04	3.00E-01	1.21E-03	9.00E-01	4.05E-04	0.01%	0.02%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-03	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	6.93E-05	0	0.00E+00	6.05E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.12E-03	2.14E+00	2.86E-03	1.07E+01	5.72E-04	0.02%	0.03%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	1.86E-04	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.39E-06	0	0.00E+00	2.05E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.08E-04	9.20E-01	2.26E-04	2.76E+00	7.52E-05	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.54E-04	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.98E-06	0	0.00E+00	1.70E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.72E-04	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Iron	4.18E+00	mg/L	0.00E+00	mg/kg	1.59E+04	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	4.18E-01	0.00E+00	2.04E+02	0	0.00E+00	7.05E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.75E+02	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	4.09E-03	mg/L	0.00E+00	mg/kg	6.49E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	3.67E-01	NA	4.22E-02	4.22E-02	1.16E-02	1.16E-02	4.09E-04	0.00E+00	8.33E-01	0	0.00E+00	2.94E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.77E+00	1.13E+00	3.34E+00	1.13E+01	3.34E-01	24.27%	17.40%
Manganese	3.17E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.50E+02	4.20E-01	NA	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	3.17E-02	0.00E+00	0.00E+00	0	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.17E-02	9.77E+02	3.24E-05	9.77E+03	3.24E-06	0.00%	0.00%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	4.57E-01	mg/kg	1.00E+00		1.14E+00	1.83E+00	NA	5.28E-01	5.28E-01	9.15E-02	9.15E-02	0.00E+00	0.00E+00	5.86E-03	0	0.00E+00	1.03E-01	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E-01	4.50E-01	2.42E-01	9.00E-01	1.21E-01	1.76%	6.31%
Mercury (methyl)	0.00E+00	mg/L	8.35E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	1.15E+00	NA	NA			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	6.40E-03	0.00E+00	6.40E-02	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	mg/L	8.12E+00	mg/kg	8.33E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	6.43E-02	6.39E-02	6.39E-02	8.71E-02	8.71E-02	0.00E+00	0.00E+00	1.07E-01	0	0.00E+00	1.09E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E+00	7.74E+01	1.54E-02	1.07E+02	1.12E-02	0.11%	0.58%
Nitrate	4.79E-01	mg/L	9.50E-02	mg/kg	9.11E-01	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	4.79E-02	0.00E+00	1.17E-02	0	0.00E+00	3.37E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.33E-02	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	5.55E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02								5.55E-03	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.55E-03	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+02	0.00E+00	3.20E+02	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	6.53E-06	0	0.00E+00	5.49E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.56E-04	6.73E+00	8.26E-05	6.73E+01	8.26E-06	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E+00	0.00E+00	6.73E+01	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E+00	mg/kg	1.00E+00			3.00E-01	NA	8.18E+00	8.18E+00	1.11E-01	1.11E-01	0.00E+00	0.00E+00	2.72E-02	0	0.00E+00	7.83E-02	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E-01	6.50E+01	1.62E-03	1.30E+02	8.11E-04	0.01%	0.04%
Selenium	0.00E+00	mg/L	7.51E-01	mg/kg	1.98E+00	mg/kg	1.00E+00	2.05E+02	4.50E+00	7.72E-01	4.92E-01	5.42E-01	5.42E-01	1.51E-01	1.51E-01	0.00E+00	0.00E+00	2.54E-02	0	0.00E+00	1.88E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E-01	1.80E+00	1.19E-01	5.40E+00	3.96E-02	0.86%	2.06%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E+00	0.00E+00	5.44E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.46E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	3.16E-01	0	0.00E+00	2.64E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.80E-01	NA	NA	NA	NA	NA	NA
Sulfate	5.14E+00	mg/L	1.39E+01	mg/kg	1.16E+02	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	5.14E-01	0.00E+00	1.50E+00	0	0.00E+00	4.31E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.32E+00	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	6.14E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00							0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.50E-01	0.00E+00	1.05E+00	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.82E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.62E-06	0	0.00E+00	3.16E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.19E-04	2.14E+00	1.49E-04	1.07E+01	2.98E-05	0.00%	0.00%
Vanadium	2.64E-02	mg/L	0.00E+00	mg/kg	2.38E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	2.64E-03	0.00E+00	3.06E-01	0	0.00E+00	1.23E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.32E-01	1.14E+01	3.79E-02	3.42E+01	1.26E-02	0.28%	0.66%
Zinc	0.00E+00	mg/L	3.22E+01	mg/kg	7.04E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	4.90E+00	1.05E+00	7.47E-01	7.47E-01	1.84E-01	1.84E-01	0.00E+00	0.00E+00	9.04E-01	0	0.00E+00	4.26E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.35E+01	1.45E+01	3.00E+00	1.31E+02	3.32E-01	21.80%	17.31%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	4.1E-03	8.6E-04	0.03%	0.04%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	2.9E+00	2.9E-01	21.37%	15.33%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	4.1E-01	4.4E-02	2.95%	2.31%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	5.2E-03	1.7E-03	0.04%	0.09%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\,x\,Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	1	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.002529	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.0243	kg/d
Body weight =	0.197	kg
Home range =	57	acres
Water intake rate =	0.0197	L/d
Site Area =	2330	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-49
Tier 1 COPCs
EEQs and Hazard Indices for the Belted Kingfisher at LHAAP
Industrial Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							-----Unitless-----									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.22E-01	0.00E+00	1.27E+00	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	1.22E-08	mg/L	8.87E-06	mg/kg	9.34E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	1.32E-09	6.19E-08	0.00E+00	0.0002538	3.39E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.57E-04	1.40E-05	1.84E+01	1.40E-04	1.84E+00	62.44%	34.79%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.77E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.80E-03	0.00E+00	2.80E-02	0.00E+00	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.82E-02	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.80E-02	0.00E+00	5.80E-01	0.00E+00	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	6.08E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.80E-03	0.00E+00	2.80E-02	0.00E+00	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.50E-03	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.08E-03	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Aluminum	6.11E+00	mg/L	9.69E+03	mg/kg	7.38E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	6.61E-01	6.77E+01	0.00E+00	3.2159206	7.63E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.34E+02	1.10E+02	7.60E+00	3.29E+02	2.53E+00	25.84%	47.99%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E+00	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	6.94E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.10E-01	0.00E+00	1.23E+00	0.00E+00	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.45E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	5.66E-02	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.69E-02	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Barium	0.00E+00	mg/L	1.32E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	9.24E-01	0.00E+00	0	1.04E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E+01	2.08E+01	5.45E-01	4.17E+01	2.72E-01	1.85%	5.15%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E+00	0.00E+00	3.33E+00	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	2.49E-03	mg/L	5.48E-01	mg/kg	4.03E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.52E+01	8.11E-01	9.31E-01	9.31E-01	9.22E-01	9.22E-01	2.69E-04	3.83E-03	0.00E+00	0.4961467	7.65E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.77E-01	1.45E+00	3.98E-01	2.00E+01	2.88E-02	1.35%	0.55%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.84E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.82E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.40E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Copper	1.18E-02	mg/L	7.20E+00	mg/kg	1.87E+01	mg/kg	1.00E+00	5.92E+03	5.25E+00	6.54E-01	5.86E-01	3.28E-01	3.28E-01	1.49E-01	1.49E-01	1.28E-03	5.03E-02	0.00E+00	8.5473788	6.61E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.26E+00	4.70E+01	1.97E-01	6.17E+01	1.50E-01	0.67%	2.84%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.29E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.70E-02	0.00E+00	2.31E-01	0.00E+00	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.80E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-02	0.00E+00	1.00E-01	0.00E+00	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	9.74E-03	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.11E-04	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.20E-01	0.00E+00	2.76E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.77E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Iron	5.98E+00	mg/L	0.00E+00	mg/kg	1.68E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	6.46E-01	0.00E+00	0.00E+00	731.43495	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.32E+02	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	4.26E-04	0.00E+00	0	2.33E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.38E-02	NA	NA	NA	NA	NA	NA
Lead	5.18E-03	mg/L	0.00E+00	mg/kg	7.30E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	3.59E-01	NA	4.00E-02	4.00E-02	1.33E-02	1.33E-02	5.60E-04	0.00E+00	0.00E+00	0.9509063	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.51E-01	3.85E+00	2.47E-01	1.16E+01	8.24E-02	0.84%	1.56%
Manganese	4.54E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+03	2.10E+00	NA	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	4.91E-02	0.00E+00	0.00E+00	111.21782	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E+02	9.77E+02	1.14E-01	9.77E+03	1.14E-02	0.39%	0.22%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	7.96E-01	mg/kg	1.00E+00		2.87E+00	1.26E+00	NA	4.09E-01	4.09E-01	1.03E-01	1.03E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.50E-01	0.00E+00	9.00E-01	0.00E+00	0.00%	0.00%
Mercury (methyl)	0.00E+00	mg/L	9.58E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.08E+00	NA	NA			0.00E+00	6.69E-04	0.00E+00	0	4.80E-03	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	5.47E-03	6.40E-03	8.55E-01	6.40E-02	8.55E-02	2.90%	1.62%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	mg/L	9.33E+00	mg/kg	8.88E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	6.21E-02	6.29E-02	6.29E-02	1.01E-01	1.01E-01	0.00E+00	6.51E-02	0.00E+00	0	3.78E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.43E-01	7.74E+01	5.73E-03	1.07E+02	4.14E-03	0.02%	0.08%
Nitrate	8.67E-01	mg/L	1.30E-01	mg/kg	1.12E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	9.38E-02	9.06E-04	0.00E+00	113.33843	4.76E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E+02	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	7.06E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03								7.63E-03	0.00E+00	0.00E+00	9.2280445	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.24E+00	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+02	0.00E+00	3.20E+02	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	7.16E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E+00	0.00E+00	6.73E+01	0.00E+00	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E+00	0.00E+00	6.73E+01	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	3.62E+00	mg/kg	1.00E+00			1.14E+00	NA	6.57E+00	6.57E+00	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.50E+01	0.00E+00	1.30E+02	0.00E+00	0.00%	0.00%
Selenium	0.00E+00	mg/L	8.67E-01	mg/kg	2.63E+00	mg/kg	1.00E+00	2.05E+02	4.50E+00	7.15E-01	4.99E-01	5.58E-01	5.58E-01	1.95E-01	1.95E-01	0.00E+00	6.05E-03	0.00E+00	0	6.82E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.42E-02	4.40E-01	1.69E-01	1.50E+00	4.95E-02	0.57%	0.94%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E+00	0.00E+00	5.44E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.65E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Sulfate	6.09E+00	mg/L	2.00E+01	mg/kg	1.75E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	6.59E-01	1.39E-01	0.00E+00	796.09765	7.33E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.98E+02	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	7.12E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00							0.00E+00	4.97E-03	0.00E+00	0	5.60E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.10E-02	3.50E-01	1.74E-01	1.05E+00	5.81E-02	0.59%	1.10%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.59E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Vanadium	3.33E-02	mg/L	0.00E+00	mg/kg	2.54E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	3.60E-03	0.00E+00	0.00E+00	4.3524781	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.36E+00	1.14E+01	3.82E-01	3.42E+01	1.27E-01	1.30%	2.41%
Zinc	0.00E+00	mg/L	3.82E+01	mg/kg	7.62E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	4.65E+00	9.78E-01	7.21E-01	7.21E-01	4.51E-01	4.51E-01	0.00E+00	2.67E-01	0.00E+00	0	5.02E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.29E+00	1.45E+01	3.65E-01	1.31E+02	4.04E-02	1.24%	0.76%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	0.0E+00	0.0E+00	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	0.0E+00	0.0E+00	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi \, x \, Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.875	unitless
Aq. Invert diet fraction =	0.125	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0.001034	kg/d
Food ingestion rate =	0.0207	kg/d
Body weight =	0.148	kg
Home range =	118.6101	acres
Water intake rate =	0.016	L/d
Site Area =	262	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-50
Tier 2 COPCs
EEQs and Hazard Indices for the Belted Kingfisher at LHAAP
Industrial Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
								--------	--------	--------	-------Unitless	--------	--------	--------	
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01
2,3,7,8-TCDD TEQ	1.07E-08	mg/L	5.59E-06	mg/kg	7.39E-06	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.51E-03	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E-02	mg/kg	1.00E+00		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	4.99E-03	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.38E-03	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.28E-03	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Aluminum	4.16E+00	mg/L	8.09E+03	mg/kg	7.05E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E+00	mg/kg	1.00E+00			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	5.90E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.27E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.34E-02	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.47E-02	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01
Cadmium	2.09E-03	mg/L	4.57E-01	mg/kg	3.79E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	2.60E+01	8.80E-01	9.58E-01	9.58E-01	6.72E-01	6.72E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.60E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.76E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Copper	9.31E-03	mg/L	6.17E+00	mg/kg	1.76E+01	mg/kg	1.00E+00	1.11E+03	1.56E+00	6.85E-01	6.44E-01	3.40E-01	3.40E-01	8.97E-02	8.97E-02
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.78E-04	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.31E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-03	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	1.86E-04	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.54E-04	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01
Iron	4.18E+00	mg/L	0.00E+00	mg/kg	1.59E+04	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E+01	1.39E+01	1.39E+01		
Lead	4.09E-03	mg/L	0.00E+00	mg/kg	6.49E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	3.67E-01	NA	4.22E-02	4.22E-02	1.16E-02	1.16E-02
Manganese	3.17E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.50E+02	4.20E-01	NA	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	4.57E-01	mg/kg	1.00E+00		1.14E+00	1.83E+00	NA	5.28E-01	5.28E-01	9.15E-02	9.15E-02
Mercury (methyl)	0.00E+00	mg/L	8.35E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	1.15E+00	NA	NA		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01
Nickel	0.00E+00	mg/L	8.12E+00	mg/kg	8.33E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	6.43E-02	6.39E-02	6.39E-02	8.71E-02	8.71E-02
Nitrate	4.79E-01	mg/L	9.50E-02	mg/kg	9.11E-01	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Nitrate/Nitrite	5.55E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E+00	mg/kg	1.00E+00			3.00E-01	NA	8.18E+00	8.18E+00	1.11E-01	1.11E-01
Selenium	0.00E+00	mg/L	7.51E-01	mg/kg	1.98E+00	mg/kg	1.00E+00	2.05E+02	4.50E+00	7.72E-01	4.92E-01	5.42E-01	5.42E-01	1.51E-01	1.51E-01
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.46E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Sulfate	5.14E+00	mg/L	1.39E+01	mg/kg	1.16E+02	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Thallium	0.00E+00	mg/L	6.14E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.82E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Vanadium	2.64E-02	mg/L	0.00E+00	mg/kg	2.38E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03
Zinc	0.00E+00	mg/L	3.22E+01	mg/kg	7.04E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	4.90E+00	1.05E+00	7.47E-01	7.47E-01	1.84E-01	1.84E-01

Chemical	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL		LOAEL		Percent Contribution to	Percent Contribution to
	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	EEQ N	mg/kg-d	EEQ L	EEQ N	EEQ L
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.22E-01	0.00E+00	1.27E+00	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	1.63E-10	5.52E-09	0.00E+00	4.262E-06	6.45E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.33E-06	1.40E-05	3.09E-01	1.40E-04	3.09E-02	21.57%	7.81%
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.80E-03	0.00E+00	2.80E-02	0.00E+00	0.00%	0.00%
4,4'-DDE	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.80E-02	0.00E+00	5.80E-01	0.00E+00	0.00%	0.00%
4,4'-DDT	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.80E-03	0.00E+00	2.80E-02	0.00E+00	0.00%	0.00%
Aldrin	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Aluminum	6.35E-02	7.99E+00	0.00E+00	0.3092005	9.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.84E+01	1.10E+02	8.97E-01	3.29E+02	2.99E-01	62.49%	75.43%
Antimony	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.10E-01	0.00E+00	1.23E+00	0.00E+00	0.00%	0.00%
Aroclor 1248	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Aroclor 1254	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Aroclor 1260	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Aroclor 1268	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Barium	0.00E+00	1.17E-01	0.00E+00	0	1.31E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.43E+00	2.08E+01	6.88E-02	4.17E+01	3.43E-02	4.79%	8.66%
Benzoic Acid	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E+00	0.00E+00	3.33E+00	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	3.19E-05	4.52E-04	0.00E+00	0.0414181	6.78E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.26E-02	1.45E+00	2.94E-02	2.00E+01	2.13E-03	2.05%	0.54%
Chlordane	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Chromium	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
cis-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Copper	1.42E-04	6.09E-03	0.00E+00	0.1790384	2.38E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.09E-01	4.70E+01	4.45E-03	6.17E+01	3.39E-03	0.31%	0.86%
Dieldrin	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.70E-02	0.00E+00	2.31E-01	0.00E+00	0.00%	0.00%
Endrin	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-02	0.00E+00	1.00E-01	0.00E+00	0.00%	0.00%
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.20E-01	0.00E+00	2.76E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Iron	6.38E-02	0.00E+00	0.00E+00	18.063291	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.81E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	6.02E-05	0.00E+00	0	7.04E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.64E-04	NA	NA	NA	NA	NA	NA
Lead	6.25E-05	0.00E+00	0.00E+00	0.0317062	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.18E-02	3.85E+00	8.25E-03	1.16E+01	2.75E-03	0.58%	0.69%
Manganese	4.84E-03	0.00E+00	0.00E+00	1.369889	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.37E+00	9.77E+02	1.41E-03	9.77E+03	1.41E-04	0.10%	0.04%
Mercury (inorganic)	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.50E-01	0.00E+00	9.00E-01	0.00E+00	0.00%	0.00%
Mercury (methyl)	0.00E+00	8.24E-05	0.00E+00	0	2.34E-04	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	3.17E-04	6.40E-03	4.95E-02	6.40E-02	4.95E-03	3.45%	1.25%
Mirex	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	8.02E-03	0.00E+00	0	9.76E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.78E-02	7.74E+01	2.30E-04	1.07E+02	1.66E-04	0.02%	0.04%
Nitrate	7.32E-03	9.38E-05	0.00E+00	2.4931816	9.86E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E+00	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	8.48E-04	0.00E+00	0.00E+00	0.2889188	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.90E-01	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+02	0.00E+00	3.20E+02	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E+00	0.00E+00	6.73E+01	0.00E+00	0.00%	0.00%
Pentachlorophenol	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E+00	0.00E+00	6.73E+01	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.50E+01	0.00E+00	1.30E+02	0.00E+00	0.00%	0.00%
Selenium	0.00E+00	7.41E-04	0.00E+00	0	8.35E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.09E-03	4.40E-01	2.07E-02	1.50E+00	6.06E-03	1.44%	1.53%
Silver	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E+00	0.00E+00	5.44E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Sulfate	7.85E-02	1.37E-02	0.00E+00	26.731493	1.44E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+01	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	6.06E-04	0.00E+00	0	6.83E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.43E-03	3.50E-01	2.12E-02	1.05E+00	7.08E-03	1.48%	1.79%
trans-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Vanadium	4.03E-04	0.00E+00	0.00E+00	0.1373744	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.38E-01	1.14E+01	1.21E-02	3.42E+01	4.03E-03	0.84%	1.02%
Zinc	0.00E+00	3.18E-02	0.00E+00	0	1.54E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.86E-01	1.45E+01	1.28E-02	1.31E+02	1.42E-03	0.89%	0.36%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	0.0E+00	0.0E+00	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	0.0E+00	0.0E+00	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.875	unitless
Aq. Invert diet fraction =	0.125	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0.001034	kg/d
`	0.0207	kg/d
Body weight =	0.148	kg
Home range =	1853	acres
Water intake rate =	0.016	L/d
Site Area =	262	acres
Area Use Factor (AUF) =	0.141392	unitless
Exposure Duration (ED) =	1	unitless

Table E-51
Tier 1 COPCs
EEQs and Hazard Indices for the Red-tailed Hawk at LHAAP
Industrial Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
									-----Unitless-----						
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00
2,3,7,8-TCDD TEQ	1.22E-08	mg/L	8.87E-06	mg/kg	9.34E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.77E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.82E-02	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	6.08E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.50E-03	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.08E-03	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Aluminum	6.11E+00	mg/L	9.69E+03	mg/kg	7.38E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E+00	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	6.94E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.45E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	5.66E-02	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.69E-02	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00
Barium	0.00E+00	mg/L	1.32E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00
Cadmium	2.49E-03	mg/L	5.48E-01	mg/kg	4.03E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.52E+01	8.11E-01	9.31E-01	9.31E-01	9.22E-01	9.22E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.84E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.82E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.40E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Copper	1.18E-02	mg/L	7.20E+00	mg/kg	1.87E+01	mg/kg	1.00E+00	5.92E+03	5.25E+00	6.54E-01	5.86E-01	3.28E-01	3.28E-01	1.49E-01	1.49E-01
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.29E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.80E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	9.74E-03	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.11E-04	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.77E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00
Iron	5.98E+00	mg/L	0.00E+00	mg/kg	1.68E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01		
Lead	5.18E-03	mg/L	0.00E+00	mg/kg	7.30E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	3.59E-01	NA	4.00E-02	4.00E-02	1.33E-02	1.33E-02
Manganese	4.54E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+03	2.10E+00	NA	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	7.96E-01	mg/kg	1.00E+00		2.87E+00	1.26E+00	NA	4.09E-01	4.09E-01	1.03E-01	1.03E-01
Mercury (methyl)	0.00E+00	mg/L	9.58E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.08E+00	NA	NA		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00
Nickel	0.00E+00	mg/L	9.33E+00	mg/kg	8.88E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	6.21E-02	6.29E-02	6.29E-02	1.01E-01	1.01E-01
Nitrate	8.67E-01	mg/L	1.30E-01	mg/kg	1.12E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Nitrate/Nitrite	7.06E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	7.16E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	3.62E+00	mg/kg	1.00E+00			1.14E+00	NA	6.57E+00	6.57E+00	1.66E-01	1.66E-01
Selenium	0.00E+00	mg/L	8.67E-01	mg/kg	2.63E+00	mg/kg	1.00E+00	2.05E+02	4.50E+00	7.15E-01	4.99E-01	5.58E-01	5.58E-01	1.95E-01	1.95E-01
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.65E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Sulfate	6.09E+00	mg/L	2.00E+01	mg/kg	1.75E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Thallium	0.00E+00	mg/L	7.12E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.59E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Vanadium	3.33E-02	mg/L	0.00E+00	mg/kg	2.54E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03
Zinc	0.00E+00	mg/L	3.82E+01	mg/kg	7.62E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	4.65E+00	9.78E-01	7.21E-01	7.21E-01	4.51E-01	4.51E-01

Chemical	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.22E-01	0.00E+00	1.27E+00	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	6.93E-10	0.00E+00	5.62E-09	1.623E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.08E-08	1.88E-09	1.63E-05	1.40E-05	1.16E+00	1.40E-04	1.16E-01	68.97%	51.11%
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	0.00E+00	1.07E-06	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.87E-05	6.76E-06	4.65E-05	2.80E-03	1.66E-02	2.80E-02	1.66E-03	0.99%	0.73%
4,4'-DDE	0.00E+00	0.00E+00	1.10E-05	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.43E-04	5.99E-05	4.14E-04	5.80E-02	7.14E-03	5.80E-01	7.14E-04	0.42%	0.31%
4,4'-DDT	0.00E+00	0.00E+00	3.66E-06	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.92E-04	3.35E-05	2.29E-04	2.80E-03	8.17E-02	2.80E-02	8.17E-03	4.85%	3.60%
Aldrin	0.00E+00	0.00E+00	9.04E-07	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.28E-05	5.73E-06	3.95E-05	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	0.00E+00	1.25E-06	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.55E-05	7.94E-06	5.46E-05	2.14E+00	2.55E-05	1.07E+01	5.11E-06	0.00%	0.00%
Aluminum	3.47E-01	0.00E+00	4.44E+00	0.2056948	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.21E+00	2.12E-01	6.42E+00	1.10E+02	5.85E-02	3.29E+02	1.95E-02	3.48%	8.59%
Antimony	0.00E+00	0.00E+00	1.52E-03	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.96E-03	1.39E-03	1.09E-02	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	0.00E+00	4.18E-06	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E-04	2.65E-05	1.82E-04	4.10E-01	4.45E-04	1.23E+00	1.48E-04	0.03%	0.07%
Aroclor 1248	0.00E+00	0.00E+00	8.75E-07	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.18E-05	5.54E-06	3.82E-05	1.80E-01	2.12E-04	1.80E+00	2.12E-05	0.01%	0.01%
Aroclor 1254	0.00E+00	0.00E+00	3.41E-05	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.14E-03	1.99E-04	1.37E-03	1.80E-01	7.63E-03	1.80E+00	7.63E-04	0.45%	0.34%
Aroclor 1260	0.00E+00	0.00E+00	1.02E-05	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.16E-04	1.08E-04	7.34E-04	1.80E-01	4.08E-03	1.80E+00	4.08E-04	0.24%	0.18%
Aroclor 1268	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Barium	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.08E+01	0.00E+00	4.17E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E+00	0.00E+00	3.33E+00	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	1.41E-04	0.00E+00	2.43E-04	0.0317342	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.05E-03	1.23E-03	4.04E-02	1.45E+00	2.79E-02	2.00E+01	2.02E-03	1.66%	0.89%
Chlordane	0.00E+00	0.00E+00	1.11E-07	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E-06	7.02E-07	4.83E-06	2.14E+00	2.26E-06	1.07E+01	4.52E-07	0.00%	0.00%
Chromium	0.00E+00	0.00E+00	1.09E-02	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E-01	2.01E-02	1.46E-01	1.00E+00	1.46E-01	5.00E+00	2.92E-02	8.67%	12.84%
cis-Nonachlor	0.00E+00	0.00E+00	2.05E-07	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.44E-06	1.30E-06	8.94E-06	2.14E+00	4.18E-06	1.07E+01	8.36E-07	0.00%	0.00%
Copper	6.71E-04	0.00E+00	1.12E-02	0.5467023	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.29E-02	9.25E-03	6.21E-01	4.70E+01	1.32E-02	6.17E+01	1.01E-02	0.78%	4.43%
Dieldrin	0.00E+00	0.00E+00	1.98E-07	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.19E-06	1.26E-06	8.65E-06	7.70E-02	1.12E-04	2.31E-01	3.74E-05	0.01%	0.02%
Endrin	0.00E+00	0.00E+00	2.29E-07	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.77E-06	1.53E-06	1.05E-05	1.00E-02	1.05E-03	1.00E-01	1.05E-04	0.06%	0.05%
gamma-Chlordane	0.00E+00	0.00E+00	5.86E-06	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.13E-04	3.72E-05	2.56E-04	2.14E+00	1.20E-04	1.07E+01	2.39E-05	0.01%	0.01%
Heptachlor	0.00E+00	0.00E+00	1.27E-07	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.61E-06	8.04E-07	5.54E-06	9.20E-01	6.02E-06	2.76E+00	2.01E-06	0.00%	0.00%
Hexachlorobenzene	0.00E+00	0.00E+00	1.07E-07	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.87E-06	6.76E-07	4.65E-06	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Iron	3.40E-01	0.00E+00	1.01E+01	46.783605	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.60E-01	1.15E-01	5.80E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	2.94E-04	0.00E+00	4.40E-02	0.0608213	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	1.84E-02	3.22E-03	1.27E-01	3.85E+00	3.29E-02	1.16E+01	1.10E-02	1.96%	4.83%
Manganese	2.58E-02	0.00E+00	0.00E+00	7.1136474	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.14E+00	9.77E+02	7.31E-03	9.77E+03	7.31E-04	0.43%	0.32%
Mercury (inorganic)	0.00E+00	0.00E+00	4.79E-04	0	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	1.55E-03	2.71E-04	2.30E-03	4.50E-01	5.12E-03	9.00E-01	2.56E-03	0.30%	1.13%
Mercury (methyl)	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	6.40E-03	0.00E+00	6.40E-02	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	0.00E+00	5.34E-03	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.70E-02	2.97E-03	2.53E-02	7.74E+01	3.27E-04	1.07E+02	2.37E-04	0.02%	0.10%
Nitrate	4.93E-02	0.00E+00	6.72E-04	7.2492849	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.52E-03	6.15E-04	7.30E+00	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	4.01E-03	0.00E+00	0.00E+00	0.5902387	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.94E-01	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+02	0.00E+00	3.20E+02	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	0.00E+00	4.31E-07	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.57E-05	2.73E-06	1.88E-05	6.73E+00	2.80E-06	6.73E+01	2.80E-07	0.00%	0.00%
Pentachlorophenol	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E+00	0.00E+00	6.73E+01	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	0.00E+00	2.18E-03	0	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	1.14E-02	1.99E-03	1.56E-02	6.50E+01	2.39E-04	1.30E+02	1.20E-04	0.01%	0.05%
Selenium	0.00E+00	0.00E+00	1.58E-03	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.72E-03	1.70E-03	1.30E-02	4.40E-01	2.95E-02	1.50E+00	8.67E-03	1.76%	3.82%
Silver	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E+00	0.00E+00	5.44E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	0.00E+00	1.60E-02	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.36E-02	1.46E-02	1.14E-01	NA	NA	NA	NA	NA	NA
Sulfate	3.46E-01	0.00E+00	1.06E-01	50.919522	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.53E-01	9.65E-02	5.20E+01	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.50E-01	0.00E+00	1.05E+00	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	0.00E+00	2.16E-07	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.84E-06	1.37E-06	9.43E-06	2.14E+00	4.41E-06	1.07E+01	8.81E-07	0.00%	0.00%
Vanadium	1.89E-03	0.00E+00	1.53E-02	0.2783906	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.85E-03	4.98E-04	2.99E-01	1.14E+01	2.62E-02	3.42E+01	8.74E-03	1.56%	3.85%
Zinc	0.00E+00	0.00E+00	4.59E-02	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.52E-01	1.14E-01	8.11E-01	1.45E+01	5.60E-02	1.31E+02	6.19E-03	3.32%	2.73%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.6E-04	3.3E-05	0.01%	0.01%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	1.1E-01	1.1E-02	6.27%	4.64%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.2E-02	1.3E-03	0.73%	0.59%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	1.2E-03	1.4E-04	0.07%	0.06%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi x Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.26	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0.63	unitless
Bird diet fraction =	0.11	unitless
Soil ingestion rate =	0.000678	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.0339	kg/d
Body weight =	1.126	kg
Home range =	941	acres
Water intake rate =	0.064	L/d
Site Area =	2330	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-52
Tier 2 COPCs
EEQs and Hazard Indices for the Red-tailed Hawk at LHAAP
Industrial Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
											----Unitless----					mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.22E-01	0.00E+00	1.27E+00	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	1.07E-08	mg/L	5.59E-06	mg/kg	7.39E-06	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	6.07E-10	0.00E+00	4.45E-09	1.928E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.62E-09	1.16E-09	1.94E-06	1.40E-05	1.39E-01	1.40E-04	1.39E-02	36.23%	20.72%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.51E-03	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	9.06E-07	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-05	4.37E-06	3.03E-05	2.80E-03	1.08E-02	2.80E-02	1.08E-03	2.83%	1.62%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E-02	mg/kg	1.00E+00		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	8.60E-06	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.55E-04	4.46E-05	3.08E-04	5.80E-02	5.32E-03	5.80E-01	5.32E-04	1.39%	0.79%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	4.99E-03	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	3.00E-06	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.39E-05	1.47E-05	1.02E-04	2.80E-03	3.63E-02	2.80E-02	3.63E-03	9.48%	5.42%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.38E-03	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	8.31E-07	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.30E-05	4.01E-06	2.78E-05	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.28E-03	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	7.73E-07	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.13E-05	3.73E-06	2.58E-05	2.14E+00	1.21E-05	1.07E+01	2.41E-06	0.00%	0.00%
Aluminum	4.16E+00	mg/L	8.09E+03	mg/kg	7.05E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	2.36E-01	0.00E+00	4.24E+00	0.1398725	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.85E-01	1.55E-01	5.66E+00	1.10E+02	5.16E-02	3.29E+02	1.72E-02	13.48%	25.68%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E+00	mg/kg	1.00E+00			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	1.43E-03	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.01E-03	8.74E-04	7.31E-03	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	5.90E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.55E-06	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.80E-05	1.71E-05	1.19E-04	4.10E-01	2.89E-04	1.23E+00	9.65E-05	0.08%	0.14%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.27E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	7.67E-07	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.12E-05	3.70E-06	2.56E-05	1.80E-01	1.42E-04	1.80E+00	1.42E-05	0.04%	0.02%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.34E-02	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	2.61E-05	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.09E-04	7.14E-05	5.07E-04	1.80E-01	2.82E-03	1.80E+00	2.82E-04	0.74%	0.42%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.47E-02	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	8.87E-06	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.67E-04	8.15E-05	5.57E-04	1.80E-01	3.10E-03	1.80E+00	3.10E-04	0.81%	0.46%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.08E+01	0.00E+00	4.17E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E+00	0.00E+00	3.33E+00	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	2.09E-03	mg/L	4.57E-01	mg/kg	3.79E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	2.60E+01	8.80E-01	9.58E-01	9.58E-01	6.72E-01	6.72E-01	1.19E-04	0.00E+00	2.28E-04	0.0187362	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.83E-03	8.44E-04	2.48E-02	1.45E+00	1.71E-02	2.00E+01	1.24E-03	4.46%	1.85%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.60E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	9.60E-08	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.65E-06	4.63E-07	3.21E-06	2.14E+00	1.50E-06	1.07E+01	3.00E-07	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	0.00E+00	0.00E+00	1.04E-02	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.78E-02	4.85E-03	4.31E-02	1.00E+00	4.31E-02	5.00E+00	8.61E-03	11.26%	12.87%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.76E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.66E-07	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.59E-06	8.01E-07	5.56E-06	2.14E+00	2.60E-06	1.07E+01	5.19E-07	0.00%	0.00%
Copper	9.31E-03	mg/L	6.17E+00	mg/kg	1.76E+01	mg/kg	1.00E+00	1.11E+03	1.56E+00	6.85E-01	6.44E-01	3.40E-01	3.40E-01	8.97E-02	8.97E-02	5.29E-04	0.00E+00	1.06E-02	0.0809913	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.99E-02	5.22E-03	1.27E-01	4.70E+01	2.71E-03	6.17E+01	2.06E-03	0.71%	3.08%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.78E-04	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.67E-07	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.63E-06	8.08E-07	5.60E-06	7.70E-02	7.27E-05	2.31E-01	2.42E-05	0.02%	0.04%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.31E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	2.00E-07	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.63E-06	1.33E-06	9.17E-06	1.00E-02	9.17E-04	1.00E-01	9.17E-05	0.24%	0.14%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-03	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.25E-06	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.98E-05	1.57E-05	1.09E-04	2.14E+00	5.08E-05	1.07E+01	1.02E-05	0.01%	0.02%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	1.86E-04	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.12E-07	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.09E-06	5.40E-07	3.74E-06	9.20E-01	4.07E-06	2.76E+00	1.36E-06	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.54E-04	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	9.27E-08	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.56E-06	4.47E-07	3.10E-06	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Iron	4.18E+00	mg/L	0.00E+00	mg/kg	1.59E+04	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	2.37E-01	0.00E+00	9.55E+00	8.171259	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.29E-01	9.24E-02	1.86E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	4.09E-03	mg/L	0.00E+00	mg/kg	6.49E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	3.67E-01	NA	4.22E-02	4.22E-02	1.16E-02	1.16E-02	2.32E-04	0.00E+00	3.91E-02	0.0143429	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	1.43E-02	2.50E-03	7.05E-02	3.85E+00	1.83E-02	1.16E+01	6.10E-03	4.78%	9.12%
Manganese	3.17E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.50E+02	4.20E-01	NA	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	1.80E-02	0.00E+00	0.00E+00	0.6196943	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.38E-01	9.77E+02	6.53E-04	9.77E+03	6.53E-05	0.17%	0.10%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	4.57E-01	mg/kg	1.00E+00		1.14E+00	1.83E+00	NA	5.28E-01	5.28E-01	9.15E-02	9.15E-02	0.00E+00	0.00E+00	2.75E-04	0	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	7.93E-04	1.38E-04	1.21E-03	4.50E-01	2.68E-03	9.00E-01	1.34E-03	0.70%	2.00%
Mercury (methyl)	0.00E+00	mg/L	8.35E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	1.15E+00	NA	NA			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	6.40E-03	0.00E+00	6.40E-02	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	mg/L	8.12E+00	mg/kg	8.33E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	6.43E-02	6.39E-02	6.39E-02	8.71E-02	8.71E-02	0.00E+00	0.00E+00	5.01E-03	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.38E-02	2.40E-03	2.12E-02	7.74E+01	2.74E-04	1.07E+02	1.98E-04	0.07%	0.30%
Nitrate	4.79E-01	mg/L	9.50E-02	mg/kg	9.11E-01	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	2.72E-02	0.00E+00	5.49E-04	1.1278361	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.91E-03	3.34E-04	1.16E+00	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	5.55E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02								3.15E-03	0.00E+00	0.00E+00	0.1306977	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.34E-01	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+02	0.00E+00	3.20E+02	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.06E-07	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.45E-06	1.48E-06	1.02E-05	6.73E+00	1.52E-06	6.73E+01	1.52E-07	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E+00	0.00E+00	6.73E+01	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E+00	mg/kg	1.00E+00			3.00E-01	NA	8.18E+00	8.18E+00	1.11E-01	1.11E-01	0.00E+00	0.00E+00	1.27E-03	0	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	4.44E-03	7.76E-04	6.49E-03	6.50E+01	9.99E-05	1.30E+02	5.00E-05	0.03%	0.07%
Selenium	0.00E+00	mg/L	7.51E-01	mg/kg	1.98E+00	mg/kg	1.00E+00	2.05E+02	4.50E+00	7.72E-01	4.92E-01	5.42E-01	5.42E-01	1.51E-01	1.51E-01	0.00E+00	0.00E+00	1.19E-03	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.67E-03	9.90E-04	7.85E-03	4.40E-01	1.78E-02	1.50E+00	5.23E-03	4.66%	7.82%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E+00	0.00E+00	5.44E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.46E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	1.48E-02	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.17E-02	9.03E-03	7.55E-02	NA	NA	NA	NA	NA	NA
Sulfate	5.14E+00	mg/L	1.39E+01	mg/kg	1.16E+02	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	2.92E-01	0.00E+00	7.01E-02	12.092478	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.45E-01	4.27E-02	1.27E+01	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	6.14E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00							0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.50E-01	0.00E+00	1.05E+00	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.82E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.70E-07	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.68E-06	8.17E-07	5.67E-06	2.14E+00	2.65E-06	1.07E+01	5.30E-07	0.00%	0.00%
Vanadium	2.64E-02	mg/L	0.00E+00	mg/kg	2.38E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	1.50E-03	0.00E+00	1.43E-02	0.0621438	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.48E-03	4.33E-04	8.09E-02	1.14E+01	7.10E-03	3.42E+01	2.37E-03	1.85%	3.53%
Zinc	0.00E+00	mg/L	3.22E+01	mg/kg	7.04E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	4.90E+00	1.05E+00	7.47E-01	7.47E-01	1.84E-01	1.84E-01	0.00E+00	0.00E+00	4.24E-02	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.46E-01	4.29E-02	3.31E-01	1.45E+01	2.28E-02	1.31E+02	2.53E-03	5.97%	3.78%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	7.4E-05	1.5E-05	0.02%	0.02%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	5.2E-02	5.2E-03	13.70%	7.83%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	6.3E-03	7.0E-04	1.66%	1.05%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	9.9E-04	1.2E-04	0.26%	0.17%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.26	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0.63	unitless
Bird diet fraction =	0.11	unitless
Soil ingestion rate =	0.000678	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.0339	kg/d
Body weight =	1.126	kg
Home range =	1722	acres
Water intake rate =	0.064	L/d
Site Area =	2330	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-53
Tier 1 COPCs
EEQs and Hazard Indices for the Deer Mouse at LHAAP
Low Impact Sub-Area/Goose Praire Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
							---Unitless---								
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00
2,3,7,8-TCDD TEQ	8.59E-09	mg/L	1.56E-06	mg/kg	3.95E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00
4,4'-DDD	0.00E+00	mg/L	2.97E-03	mg/kg	1.40E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	4.30E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01
4,4'-DDT	0.00E+00	mg/L	3.04E-03	mg/kg	2.23E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.87E-04	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.76E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Aluminum	2.10E+00	mg/L	1.03E+04	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	6.37E-01	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.07E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.42E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00
Aroclor 1254	0.00E+00	mg/L	5.10E-02	mg/kg	4.11E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	7.47E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.50E-04	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00
Barium	0.00E+00	mg/L	1.34E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	6.80E-02	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00
bis(2-ethylhexyl)phthalate	2.43E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00
Cadmium	0.00E+00	mg/L	5.24E-01	mg/kg	3.84E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.58E+01	8.28E-01	9.52E-01	9.52E-01	9.22E-01	9.22E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.88E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.22E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Copper	1.42E-02	mg/L	1.27E+01	mg/kg	7.43E+00	mg/kg	1.00E+00	5.92E+03	5.25E+00	1.32E+00	4.15E-01	5.75E-01	5.75E-01	1.49E-01	1.49E-01
Dieldrin	0.00E+00	mg/L	3.00E-03	mg/kg	1.86E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.75E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.20E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00
Iron	3.14E+00	mg/L	0.00E+00	mg/kg	1.00E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01		
Lead	7.76E-03	mg/L	7.66E+01	mg/kg	2.51E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	4.39E-01	3.92E-02	6.40E-02	6.40E-02	1.33E-02	1.33E-02
Manganese	2.73E-01	mg/L	0.00E+00	mg/kg	9.35E+02	mg/kg	1.00E+00	2.00E+03	2.10E+00	2.21E-01	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.95E-02	mg/kg	1.00E+00		2.87E+00	7.16E+00	NA	1.35E+00	1.35E+00	1.03E-01	1.03E-01
Mercury (methyl)	0.00E+00	mg/L	2.65E-01	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	6.78E-01	NA	NA		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.41E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00
Nickel	0.00E+00	mg/L	0.00E+00	mg/kg	7.10E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	NA	6.65E-02	6.65E-02	1.01E-01	1.01E-01
Nitrate	8.86E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Nitrate/Nitrite	8.12E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	8.83E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	4.23E-01	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.80E-01	mg/kg	1.00E+00			1.14E+00	NA	1.88E+01	1.88E+01	1.66E-01	1.66E-01
Selenium	3.74E-03	mg/L	1.29E+00	mg/kg	4.13E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.18E+00	5.20E-01	4.64E-01	4.64E-01	1.95E-01	1.95E-01
Silver	0.00E+00	mg/L	2.66E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Sulfate	1.42E+01	mg/L	6.05E+00	mg/kg	2.30E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Thallium	1.70E-03	mg/L	7.02E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.04E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Vanadium	0.00E+00	mg/L	0.00E+00	mg/kg	1.53E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03
Zinc	8.78E-02	mg/L	9.41E+01	mg/kg	5.89E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.53E+00	6.57E-01	8.08E-01	8.08E-01	4.51E-01	4.51E-01

Chemical	EED Surface Water (mg/kg-d)	EED Sediment (mg/kg-d)	EED Soil (mg/kg-d)	EED Fish (mg/kg-d)	EED Aq. Invert. (mg/kg-d)	EED Terr. Invert. (mg/kg-d)	EED Aq. Plants (mg/kg-d)	EED Terr. Plants (mg/kg-d)	EED Plant Roots (mg/kg-d)	EED Mammals (mg/kg-d)	EED Birds (mg/kg-d)	Total EED (mg/kg-d)	NOAEL (mg/kg-d)	EEQ N	LOAEL (mg/kg-d)	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	2.58E-09	0.00E+00	7.32E-09	0.00E+00	0.00E+00	4.07E-06	0.00E+00	8.32E-10	0.00E+00	0.00E+00	0.00E+00	4.08E-06	1.00E-06	4.08E+00	1.00E-05	4.08E-01	48.29%	34.89%
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	0.00E+00	2.60E-06	0.00E+00	0.00E+00	1.01E-03	0.00E+00	5.20E-06	0.00E+00	0.00E+00	0.00E+00	1.02E-03	8.00E-01	1.27E-03	4.00E+00	2.54E-04	0.02%	0.02%
4,4'-DDE	0.00E+00	0.00E+00	7.98E-06	0.00E+00	0.00E+00	3.11E-03	0.00E+00	1.24E-04	0.00E+00	0.00E+00	0.00E+00	3.24E-03	8.00E-01	4.05E-03	4.00E+00	8.11E-04	0.05%	0.07%
4,4'-DDT	0.00E+00	0.00E+00	4.13E-06	0.00E+00	0.00E+00	1.66E-03	0.00E+00	8.27E-06	0.00E+00	0.00E+00	0.00E+00	1.68E-03	8.00E-01	2.09E-03	4.00E+00	4.19E-04	0.02%	0.04%
Aldrin	0.00E+00	0.00E+00	3.47E-07	0.00E+00	0.00E+00	1.39E-04	0.00E+00	5.88E-08	0.00E+00	0.00E+00	0.00E+00	1.40E-04	2.00E-01	6.99E-04	1.00E+00	1.40E-04	0.01%	0.01%
alpha-Chlordane	0.00E+00	0.00E+00	6.98E-07	0.00E+00	0.00E+00	2.75E-04	0.00E+00	7.03E-07	0.00E+00	0.00E+00	0.00E+00	2.76E-04	4.58E+00	6.03E-05	9.16E+00	3.02E-05	0.00%	0.00%
Aluminum	6.29E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.29E-01	1.93E+00	3.26E-01	1.93E+01	3.26E-02	3.86%	2.79%
Antimony	0.00E+00	0.00E+00	1.18E-03	0.00E+00	0.00E+00	3.37E-02	0.00E+00	2.07E-03	0.00E+00	0.00E+00	0.00E+00	3.69E-02	1.25E-01	2.95E-01	1.25E+00	2.95E-02	3.50%	2.53%
Aroclor 1242	0.00E+00	0.00E+00	5.69E-06	0.00E+00	0.00E+00	2.25E-03	0.00E+00	2.32E-05	0.00E+00	0.00E+00	0.00E+00	2.28E-03	6.85E-02	3.33E-02	6.85E-01	3.33E-03	0.39%	0.28%
Aroclor 1248	0.00E+00	0.00E+00	2.63E-06	0.00E+00	0.00E+00	1.04E-03	0.00E+00	6.65E-07	0.00E+00	0.00E+00	0.00E+00	1.04E-03	6.80E-02	1.53E-02	6.80E-01	1.53E-03	0.18%	0.13%
Aroclor 1254	0.00E+00	0.00E+00	7.62E-06	0.00E+00	0.00E+00	3.09E-03	0.00E+00	1.68E-06	0.00E+00	0.00E+00	0.00E+00	3.10E-03	6.80E-02	4.56E-02	6.80E-01	4.56E-03	0.54%	0.39%
Aroclor 1260	0.00E+00	0.00E+00	1.39E-05	0.00E+00	0.00E+00	5.91E-03	0.00E+00	1.57E-06	0.00E+00	0.00E+00	0.00E+00	5.92E-03	6.80E-02	8.71E-02	6.80E-01	8.71E-03	1.03%	0.74%
Aroclor 1268	0.00E+00	0.00E+00	1.58E-06	0.00E+00	0.00E+00	5.52E-04	0.00E+00	2.07E-05	0.00E+00	0.00E+00	0.00E+00	5.74E-04	6.80E-02	8.44E-03	6.80E-01	8.44E-04	0.10%	0.07%
Barium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E+00	0.00E+00	1.98E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	0.00E+00	1.26E-04	0.00E+00	0.00E+00	4.18E-02	0.00E+00	1.01E-02	0.00E+00	0.00E+00	0.00E+00	5.21E-02	4.00E+00	1.30E-02	4.00E+01	1.30E-03	0.15%	0.11%
bis(2-ethylhexyl)phthalate	7.28E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.28E-03	1.83E+01	3.97E-04	1.83E+02	3.98E-05	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	0.00E+00	7.12E-04	0.00E+00	0.00E+00	4.59E-01	0.00E+00	1.69E-02	0.00E+00	0.00E+00	0.00E+00	4.77E-01	1.00E+00	4.77E-01	1.00E+01	4.77E-02	5.65%	4.08%
Chlordane	0.00E+00	0.00E+00	3.48E-07	0.00E+00	0.00E+00	1.37E-04	0.00E+00	3.51E-07	0.00E+00	0.00E+00	0.00E+00	1.38E-04	4.58E+00	3.01E-05	9.16E+00	1.50E-05	0.00%	0.00%
Chromium	0.00E+00	0.00E+00	2.27E-02	0.00E+00	0.00E+00	1.80E+00	0.00E+00	2.72E-01	0.00E+00	0.00E+00	0.00E+00	2.09E+00	3.28E+00	6.37E-01	1.31E+01	1.59E-01	7.54%	13.61%
cis-Nonachlor	0.00E+00	0.00E+00	4.59E-07	0.00E+00	0.00E+00	1.81E-04	0.00E+00	4.63E-07	0.00E+00	0.00E+00	0.00E+00	1.82E-04	4.58E+00	3.97E-05	9.16E+00	1.99E-05	0.00%	0.00%
Copper	4.25E-03	0.00E+00	1.38E-02	0.00E+00	0.00E+00	4.54E-01	0.00E+00	1.98E-01	0.00E+00	0.00E+00	0.00E+00	6.70E-01	1.17E+01	5.73E-02	1.51E+01	4.43E-02	0.68%	3.79%
Dieldrin	0.00E+00	0.00E+00	3.44E-07	0.00E+00	0.00E+00	1.31E-04	0.00E+00	1.41E-05	0.00E+00	0.00E+00	0.00E+00	1.46E-04	2.00E-02	7.29E-03	2.00E-01	7.29E-04	0.09%	0.06%
Endrin	0.00E+00	0.00E+00	5.11E-07	0.00E+00	0.00E+00	1.95E-04	0.00E+00	4.88E-07	0.00E+00	0.00E+00	0.00E+00	1.96E-04	9.20E-02	2.13E-03	9.20E-01	2.13E-04	0.03%	0.02%
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	0.00E+00	4.09E-07	0.00E+00	0.00E+00	1.59E-04	0.00E+00	1.93E-07	0.00E+00	0.00E+00	0.00E+00	1.59E-04	8.00E-02	1.99E-03	2.90E-01	5.49E-04	0.02%	0.05%
HMX	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	9.43E-01	0.00E+00	1.86E+01	0.00E+00	0.00E+00	3.63E+01	0.00E+00	1.86E+00	0.00E+00	0.00E+00	0.00E+00	5.77E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	2.33E-03	0.00E+00	4.66E-02	0.00E+00	0.00E+00	5.12E-01	0.00E+00	7.46E-02	0.00E+00	0.00E+00	0.00E+00	6.35E-01	8.00E+00	7.94E-02	8.00E+01	7.94E-03	0.94%	0.68%
Manganese	8.19E-02	0.00E+00	1.73E+00	0.00E+00	0.00E+00	9.58E+00	0.00E+00	4.34E+00	0.00E+00	0.00E+00	0.00E+00	1.57E+01	8.80E+01	1.79E-01	2.84E+02	5.54E-02	2.12%	4.74%
Mercury (inorganic)	0.00E+00	0.00E+00	1.10E-04	0.00E+00	0.00E+00	1.98E-02	NA	3.72E-03	0.00E+00	0.00E+00	0.00E+00	2.36E-02	1.32E+01	1.79E-03	3.96E+01	5.96E-04	0.02%	0.05%
Mercury (methyl)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	3.20E-02	0.00E+00	1.60E-01	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	0.00E+00	6.33E-07	0.00E+00	0.00E+00	2.57E-04	0.00E+00	5.44E-07	0.00E+00	0.00E+00	0.00E+00	2.58E-04	7.00E-02	3.69E-03	7.00E-01	3.69E-04	0.04%	0.03%
Nickel	0.00E+00	0.00E+00	1.32E-02	0.00E+00	0.00E+00	1.56E+00	NA	2.19E-02	0.00E+00	0.00E+00	0.00E+00	1.59E+00	4.00E+01	3.98E-02	8.00E+01	1.99E-02	0.47%	1.70%
Nitrate	2.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.66E-01	5.07E+02	5.24E-04	1.13E+03	2.35E-04	0.01%	0.02%
Nitrate/Nitrite	2.44E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.44E-02	5.07E+02	4.80E-05	1.13E+03	2.16E-05	0.00%	0.00%
Oxychlordane	0.00E+00	0.00E+00	3.26E-07	0.00E+00	0.00E+00	1.25E-04	0.00E+00	2.15E-07	0.00E+00	0.00E+00	0.00E+00	1.25E-04	4.58E+00	2.73E-05	9.16E+00	1.37E-05	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	0.00E+00	1.64E-06	0.00E+00	0.00E+00	6.22E-04	0.00E+00	1.37E-06	0.00E+00	0.00E+00	0.00E+00	6.25E-04	2.40E-01	2.60E-03	2.40E+00	2.60E-04	0.03%	0.02%
Pentachlorophenol	0.00E+00	0.00E+00	7.84E-04	0.00E+00	0.00E+00	2.91E-01	0.00E+00	1.38E-03	0.00E+00	0.00E+00	0.00E+00	2.93E-01	2.40E-01	1.22E+00	2.40E+00	1.22E-01	14.46%	10.45%
Perchlorate	0.00E+00	0.00E+00	5.19E-04	0.00E+00	0.00E+00	1.48E-02	NA	2.44E-01	0.00E+00	0.00E+00	0.00E+00	2.59E-01	8.50E+00	3.05E-02	2.55E+01	1.02E-02	0.36%	0.87%
Selenium	1.12E-03	0.00E+00	7.65E-04	0.00E+00	0.00E+00	2.25E-02	0.00E+00	8.87E-03	0.00E+00	0.00E+00	0.00E+00	3.33E-02	2.00E-01	1.66E-01	3.30E-01	1.01E-01	1.97%	8.63%
Silver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	0.00E+00	2.65E-02	0.00E+00	0.00E+00	1.84E-01	0.00E+00	2.32E-01	0.00E+00	0.00E+00	0.00E+00	4.42E-01	2.63E+02	1.68E-03	7.89E+02	5.60E-04	0.02%	0.05%
Sulfate	4.27E+00	0.00E+00	4.27E-01	0.00E+00	0.00E+00	1.22E+01	0.00E+00	3.73E+00	0.00E+00	0.00E+00	0.00E+00	2.06E+01	NA	NA	NA	NA	NA	NA
Thallium	5.10E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E-04	7.40E-03	6.89E-02	7.40E-02	6.89E-03	0.82%	0.59%
trans-Nonachlor	0.00E+00	0.00E+00	5.63E-07	0.00E+00	0.00E+00	2.22E-04	0.00E+00	5.67E-07	0.00E+00	0.00E+00	0.00E+00	2.23E-04	4.58E+00	4.87E-05	9.16E+00	2.43E-05	0.00%	0.00%
Vanadium	0.00E+00	0.00E+00	2.84E-02	0.00E+00	0.00E+00	6.26E-02	0.00E+00	2.84E-03	0.00E+00	0.00E+00	0.00E+00	9.39E-02	2.10E-01	4.47E-01	2.10E+00	4.47E-02	5.29%	3.82%
Zinc	2.63E-02	0.00E+00	1.09E-01	0.00E+00	0.00E+00	1.51E+01	0.00E+00	2.21E+00	0.00E+00	0.00E+00	0.00E+00	1.74E+01	1.60E+02	1.09E-01	3.20E+02	5.45E-02	1.29%	4.66%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	2.1E-04	1.0E-04	0.00%	0.01%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	7.4E-03	1.5E-03	0.09%	0.13%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.9E-01	1.9E-02	2.25%	1.62%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	4.0E-04	4.0E-05	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	1.0E-02	1.1E-03	0.12%	0.09%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi \times Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text tables.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0.5	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0.5	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	4.08E-05	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.00204	kg/d
Body weight =	0.022	kg
Home range =	0.034595	acres
Water intake rate =	0.0066	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-54
Tier 2 COPCs
EEQs and Hazard Indices for the Deer Mouse at LHAAP
Low Impact Sub-Area/Goose Praire Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
							---Unitless---								
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01
2,3,7,8-TCDD TEQ	7.00E-09	mg/L	1.27E-06	mg/kg	3.18E-06	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01
4,4'-DDD	0.00E+00	mg/L	2.56E-03	mg/kg	8.00E-04	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	3.10E-03	mg/kg	1.00E+00		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01
4,4'-DDT	0.00E+00	mg/L	2.61E-03	mg/kg	1.07E-03	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.15E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Aluminum	1.73E+00	mg/L	8.98E+03	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-01	mg/kg	1.00E+00			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.55E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.21E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01
Aroclor 1254	0.00E+00	mg/L	4.20E-02	mg/kg	3.32E-03	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	4.07E-03	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	7.92E-04	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	5.10E-02	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01
bis(2-ethylhexyl)phthalate	1.43E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01
Cadmium	0.00E+00	mg/L	4.84E-01	mg/kg	3.02E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	2.87E+01	8.58E-01	1.06E+00	1.06E+00	6.72E-01	6.72E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Copper	1.23E-02	mg/L	1.08E+01	mg/kg	6.53E+00	mg/kg	1.00E+00	1.11E+03	1.56E+00	1.45E+00	4.57E-01	6.22E-01	6.22E-01	8.97E-02	8.97E-02
Dieldrin	0.00E+00	mg/L	2.57E-03	mg/kg	1.72E-04	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.93E-04	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01
Iron	2.68E+00	mg/L	0.00E+00	mg/kg	9.10E+03	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E+01	1.39E+01	1.39E+01		
Lead	6.26E-03	mg/L	5.97E+01	mg/kg	2.21E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	4.50E-01	4.37E-02	6.78E-02	6.78E-02	1.16E-02	1.16E-02
Manganese	2.12E-01	mg/L	0.00E+00	mg/kg	8.30E+02	mg/kg	1.00E+00	2.50E+02	4.20E-01	2.26E-01	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-02	mg/kg	1.00E+00		1.14E+00	7.64E+00	NA	1.41E+00	1.41E+00	9.15E-02	9.15E-02
Mercury (methyl)	0.00E+00	mg/L	2.09E-01	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	7.56E-01	NA	NA		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.88E-04	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01
Nickel	0.00E+00	mg/L	0.00E+00	mg/kg	6.36E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	NA	6.84E-02	6.84E-02	8.71E-02	8.71E-02
Nitrate	4.70E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Nitrate/Nitrite	6.18E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E-04	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.62E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-01	mg/kg	1.00E+00			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	7.70E-02	mg/kg	1.00E+00			3.00E-01	NA	3.19E+01	3.19E+01	1.11E-01	1.11E-01
Selenium	3.23E-03	mg/L	1.10E+00	mg/kg	3.74E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.21E+00	5.12E-01	4.59E-01	4.59E-01	1.51E-01	1.51E-01
Silver	0.00E+00	mg/L	2.05E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.30E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Sulfate	1.10E+01	mg/L	4.59E+00	mg/kg	1.30E+02	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Thallium	1.00E-03	mg/L	6.22E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Vanadium	0.00E+00	mg/L	0.00E+00	mg/kg	1.45E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03
Zinc	6.50E-02	mg/L	7.78E+01	mg/kg	4.79E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	6.34E+00	7.15E-01	8.84E-01	8.84E-01	1.84E-01	1.84E-01

Chemical	EED Surface Water (mg/kg-d)	EED Sediment (mg/kg-d)	EED Soil (mg/kg-d)	EED Fish (mg/kg-d)	EED Aq. Invert. (mg/kg-d)	EED Terr. Invert. (mg/kg-d)	EED Aq. Plants (mg/kg-d)	EED Terr. Plants (mg/kg-d)	EED Plant Roots (mg/kg-d)	EED Mammals (mg/kg-d)	EED Birds (mg/kg-d)	Total EED (mg/kg-d)	NOAEL (mg/kg-d)	EEQ N	LOAEL (mg/kg-d)	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	2.10E-09	0.00E+00	5.90E-09	0.00E+00	0.00E+00	1.62E-06	0.00E+00	5.72E-10	0.00E+00	0.00E+00	0.00E+00	1.63E-06	1.00E-06	1.63E+00	1.00E-05	1.63E-01	42.63%	27.84%
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	0.00E+00	1.48E-06	0.00E+00	0.00E+00	3.32E-04	0.00E+00	1.04E-06	0.00E+00	0.00E+00	0.00E+00	3.35E-04	8.00E-01	4.18E-04	4.00E+00	8.37E-05	0.01%	0.01%
4,4'-DDE	0.00E+00	0.00E+00	5.75E-06	0.00E+00	0.00E+00	1.29E-03	0.00E+00	1.95E-05	0.00E+00	0.00E+00	0.00E+00	1.32E-03	8.00E-01	1.65E-03	4.00E+00	3.30E-04	0.04%	0.06%
4,4'-DDT	0.00E+00	0.00E+00	1.98E-06	0.00E+00	0.00E+00	4.59E-04	0.00E+00	1.39E-06	0.00E+00	0.00E+00	0.00E+00	4.63E-04	8.00E-01	5.79E-04	4.00E+00	1.16E-04	0.02%	0.02%
Aldrin	0.00E+00	0.00E+00	3.27E-07	0.00E+00	0.00E+00	7.56E-05	0.00E+00	3.97E-08	0.00E+00	0.00E+00	0.00E+00	7.60E-05	2.00E-01	3.80E-04	1.00E+00	7.60E-05	0.01%	0.01%
alpha-Chlordane	0.00E+00	0.00E+00	5.84E-07	0.00E+00	0.00E+00	1.33E-04	0.00E+00	1.36E-07	0.00E+00	0.00E+00	0.00E+00	1.34E-04	4.58E+00	2.92E-05	9.16E+00	1.46E-05	0.00%	0.00%
Aluminum	5.19E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.19E-01	1.93E+00	2.69E-01	1.93E+01	2.69E-02	7.02%	4.58%
Antimony	0.00E+00	0.00E+00	9.45E-04	0.00E+00	0.00E+00	7.08E-03	0.00E+00	8.74E-04	0.00E+00	0.00E+00	0.00E+00	8.90E-03	1.25E-01	7.12E-02	1.25E+00	7.12E-03	1.86%	1.21%
Aroclor 1242	0.00E+00	0.00E+00	4.73E-06	0.00E+00	0.00E+00	1.08E-03	0.00E+00	9.92E-07	0.00E+00	0.00E+00	0.00E+00	1.08E-03	6.85E-02	1.58E-02	6.85E-01	1.58E-03	0.41%	0.27%
Aroclor 1248	0.00E+00	0.00E+00	2.24E-06	0.00E+00	0.00E+00	5.11E-04	0.00E+00	4.70E-07	0.00E+00	0.00E+00	0.00E+00	5.13E-04	6.80E-02	7.55E-03	6.80E-01	7.55E-04	0.20%	0.13%
Aroclor 1254	0.00E+00	0.00E+00	6.15E-06	0.00E+00	0.00E+00	1.44E-03	0.00E+00	5.50E-07	0.00E+00	0.00E+00	0.00E+00	1.44E-03	6.80E-02	2.12E-02	6.80E-01	2.12E-03	0.55%	0.36%
Aroclor 1260	0.00E+00	0.00E+00	7.55E-06	0.00E+00	0.00E+00	1.86E-03	0.00E+00	1.21E-07	0.00E+00	0.00E+00	0.00E+00	1.86E-03	6.80E-02	2.74E-02	6.80E-01	2.74E-03	0.72%	0.47%
Aroclor 1268	0.00E+00	0.00E+00	1.47E-06	0.00E+00	0.00E+00	2.97E-04	0.00E+00	1.93E-05	0.00E+00	0.00E+00	0.00E+00	3.17E-04	6.80E-02	4.67E-03	6.80E-01	4.67E-04	0.12%	0.08%
Barium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E+00	0.00E+00	1.98E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	0.00E+00	9.46E-05	0.00E+00	0.00E+00	1.81E-02	0.00E+00	7.60E-03	0.00E+00	0.00E+00	0.00E+00	2.58E-02	4.00E+00	6.45E-03	4.00E+01	6.45E-04	0.17%	0.11%
bis(2-ethylhexyl)phthalate	4.28E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.28E-03	1.83E+01	2.34E-04	1.83E+02	2.34E-05	0.01%	0.00%
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	0.00E+00	5.61E-04	0.00E+00	0.00E+00	4.03E-01	0.00E+00	1.49E-02	0.00E+00	0.00E+00	0.00E+00	4.18E-01	1.00E+00	4.18E-01	1.00E+01	4.18E-02	10.92%	7.13%
Chlordane	0.00E+00	0.00E+00	3.21E-07	0.00E+00	0.00E+00	7.29E-05	0.00E+00	7.48E-08	0.00E+00	0.00E+00	0.00E+00	7.33E-05	4.58E+00	1.60E-05	9.16E+00	8.00E-06	0.00%	0.00%
Chromium	0.00E+00	0.00E+00	2.04E-02	0.00E+00	0.00E+00	1.56E-01	0.00E+00	2.10E-02	0.00E+00	0.00E+00	0.00E+00	1.98E-01	3.28E+00	6.03E-02	1.31E+01	1.51E-02	1.57%	2.57%
cis-Nonachlor	0.00E+00	0.00E+00	3.93E-07	0.00E+00	0.00E+00	8.93E-05	0.00E+00	9.17E-08	0.00E+00	0.00E+00	0.00E+00	8.98E-05	4.58E+00	1.96E-05	9.16E+00	9.81E-06	0.00%	0.00%
Copper	3.68E-03	0.00E+00	1.21E-02	0.00E+00	0.00E+00	4.40E-01	0.00E+00	1.88E-01	0.00E+00	0.00E+00	0.00E+00	6.44E-01	1.17E+01	5.51E-02	1.51E+01	4.25E-02	1.44%	7.25%
Dieldrin	0.00E+00	0.00E+00	3.19E-07	0.00E+00	0.00E+00	7.02E-05	0.00E+00	1.91E-07	0.00E+00	0.00E+00	0.00E+00	7.07E-05	2.00E-02	3.53E-03	2.00E-01	3.53E-04	0.09%	0.06%
Endrin	0.00E+00	0.00E+00	4.41E-07	0.00E+00	0.00E+00	9.71E-05	0.00E+00	3.02E-07	0.00E+00	0.00E+00	0.00E+00	9.78E-05	9.20E-02	1.06E-03	9.20E-01	1.06E-04	0.03%	0.02%
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	0.00E+00	3.58E-07	0.00E+00	0.00E+00	8.01E-05	0.00E+00	1.42E-07	0.00E+00	0.00E+00	0.00E+00	8.06E-05	8.00E-02	1.01E-03	2.90E-01	2.78E-04	0.03%	0.05%
HMX	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	8.05E-01	0.00E+00	1.69E+01	0.00E+00	0.00E+00	1.52E+01	0.00E+00	1.69E+00	0.00E+00	0.00E+00	0.00E+00	3.46E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	1.88E-03	0.00E+00	4.09E-02	0.00E+00	0.00E+00	4.61E-01	0.00E+00	6.94E-02	0.00E+00	0.00E+00	0.00E+00	5.73E-01	8.00E+00	7.16E-02	8.00E+01	7.16E-03	1.87%	1.22%
Manganese	6.36E-02	0.00E+00	1.54E+00	0.00E+00	0.00E+00	8.70E+00	0.00E+00	3.04E+00	0.00E+00	0.00E+00	0.00E+00	1.33E+01	8.80E+01	1.52E-01	2.84E+02	4.70E-02	3.96%	8.00%
Mercury (inorganic)	0.00E+00	0.00E+00	1.00E-04	0.00E+00	0.00E+00	1.91E-02	NA	3.53E-03	0.00E+00	0.00E+00	0.00E+00	2.28E-02	1.32E+01	1.72E-03	3.96E+01	5.75E-04	0.04%	0.10%
Mercury (methyl)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	3.20E-02	0.00E+00	1.60E-01	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	0.00E+00	5.35E-07	0.00E+00	0.00E+00	1.25E-04	0.00E+00	4.60E-08	0.00E+00	0.00E+00	0.00E+00	1.26E-04	7.00E-02	1.80E-03	7.00E-01	1.80E-04	0.05%	0.03%
Nickel	0.00E+00	0.00E+00	1.18E-02	0.00E+00	0.00E+00	3.12E-01	NA	2.02E-02	0.00E+00	0.00E+00	0.00E+00	3.44E-01	4.00E+01	8.60E-03	8.00E+01	4.30E-03	0.22%	0.73%
Nitrate	1.41E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.41E-01	5.07E+02	2.78E-04	1.13E+03	1.25E-04	0.01%	0.02%
Nitrate/Nitrite	1.85E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.85E-02	5.07E+02	3.66E-05	1.13E+03	1.64E-05	0.00%	0.00%
Oxychlordane	0.00E+00	0.00E+00	3.16E-07	0.00E+00	0.00E+00	6.97E-05	0.00E+00	2.08E-07	0.00E+00	0.00E+00	0.00E+00	7.02E-05	4.58E+00	1.53E-05	9.16E+00	7.67E-06	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	0.00E+00	1.04E-06	0.00E+00	0.00E+00	2.28E-04	0.00E+00	7.14E-07	0.00E+00	0.00E+00	0.00E+00	2.30E-04	2.40E-01	9.57E-04	2.40E+00	9.57E-05	0.02%	0.02%
Pentachlorophenol	0.00E+00	0.00E+00	4.59E-04	0.00E+00	0.00E+00	9.83E-02	0.00E+00	4.88E-04	0.00E+00	0.00E+00	0.00E+00	9.92E-02	2.40E-01	4.13E-01	2.40E+00	4.13E-02	10.79%	7.05%
Perchlorate	0.00E+00	0.00E+00	1.43E-04	0.00E+00	0.00E+00	1.07E-03	NA	1.14E-01	0.00E+00	0.00E+00	0.00E+00	1.15E-01	8.50E+00	1.36E-02	2.55E+01	4.52E-03	0.35%	0.77%
Selenium	9.68E-04	0.00E+00	6.93E-04	0.00E+00	0.00E+00	2.10E-02	0.00E+00	7.95E-03	0.00E+00	0.00E+00	0.00E+00	3.06E-02	2.00E-01	1.53E-01	3.30E-01	9.26E-02	3.99%	15.79%
Silver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	0.00E+00	2.41E-02	0.00E+00	0.00E+00	5.24E-02	0.00E+00	1.26E-01	0.00E+00	0.00E+00	0.00E+00	2.03E-01	2.63E+02	7.72E-04	7.89E+02	2.57E-04	0.02%	0.04%
Sulfate	3.30E+00	0.00E+00	2.41E-01	0.00E+00	0.00E+00	1.81E+00	0.00E+00	1.27E+00	0.00E+00	0.00E+00	0.00E+00	6.62E+00	NA	NA	NA	NA	NA	NA
Thallium	3.01E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.01E-04	7.40E-03	4.06E-02	7.40E-02	4.06E-03	1.06%	0.69%
trans-Nonachlor	0.00E+00	0.00E+00	4.69E-07	0.00E+00	0.00E+00	1.06E-04	0.00E+00	1.09E-07	0.00E+00	0.00E+00	0.00E+00	1.07E-04	4.58E+00	2.34E-05	9.16E+00	1.17E-05	0.00%	0.00%
Vanadium	0.00E+00	0.00E+00	2.68E-02	0.00E+00	0.00E+00	2.82E-02	0.00E+00	2.42E-03	0.00E+00	0.00E+00	0.00E+00	5.74E-02	2.10E-01	2.73E-01	2.10E+00	2.73E-02	7.14%	4.66%
Zinc	1.95E-02	0.00E+00	8.89E-02	0.00E+00	0.00E+00	1.41E+01	0.00E+00	1.97E+00	0.00E+00	0.00E+00	0.00E+00	1.62E+01	1.60E+02	1.01E-01	3.20E+02	5.05E-02	2.64%	8.61%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.0E-04	5.2E-05	0.00%	0.01%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	2.6E-03	5.3E-04	0.07%	0.09%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	7.7E-02	7.7E-03	2.00%	1.31%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	2.3E-04	2.3E-05	0.01%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	5.0E-03	5.4E-04	0.13%	0.09%

Intake Equation:

$$E_j = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IR_i\, x\, C_{ij}}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0.5	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0.5	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.0000408	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.00204	kg/d
Body weight =	0.022	kg
Home range =	0.1457916	acres
Water intake rate =	0.0066	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-55
Tier 1 COPCs
EEQs and Hazard Indices for the Raccoon at LHAAP
Low Impact Sub-Area/Goose Praire Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL		LOAEL		Percent Contribution to	Percent Contribution to
									----------Unitless----------							mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	EEQ N	mg/kg-d	EEQ L	EEQ N	EEQ L
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	8.59E-09	mg/L	1.56E-06	mg/kg	3.95E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	7.07E-10	3.68E-09	9.31E-09	3.66E-06	2.57E-07	6.60E-07	0.00E+00	5.40E-10	0.00E+00	6.03E-10	0.00E+00	4.59E-06	1.00E-06	4.59E+00	1.00E-05	4.59E-01	2.15%	2.09%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	mg/L	2.97E-03	mg/kg	1.40E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	7.01E-06	3.30E-06	0.00E+00	9.40E-06	1.64E-04	0.00E+00	3.37E-06	0.00E+00	4.05E-06	0.00E+00	1.91E-04	8.00E-01	2.39E-04	4.00E+00	4.77E-05	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	4.30E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	1.01E-05	0.00E+00	0.00E+00	5.05E-04	0.00E+00	8.03E-05	0.00E+00	1.07E-05	0.00E+00	6.06E-04	8.00E-01	7.58E-04	4.00E+00	1.52E-04	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	3.04E-03	mg/kg	2.23E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	7.17E-06	5.26E-06	0.00E+00	3.85E-05	2.70E-04	0.00E+00	5.37E-06	0.00E+00	9.30E-06	0.00E+00	3.36E-04	8.00E-01	4.19E-04	4.00E+00	8.39E-05	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.87E-04	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.41E-07	0.00E+00	0.00E+00	2.26E-05	0.00E+00	3.82E-08	0.00E+00	5.41E-07	0.00E+00	2.36E-05	2.00E-01	1.18E-04	1.00E+00	2.36E-05	0.00%	0.00%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.76E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	8.87E-07	0.00E+00	0.00E+00	4.46E-05	0.00E+00	4.57E-07	0.00E+00	1.09E-06	0.00E+00	4.71E-05	4.58E+00	1.03E-05	9.16E+00	5.14E-06	0.00%	0.00%
Aluminum	2.10E+00	mg/L	1.03E+04	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	1.73E-01	2.43E+01	0.00E+00	2.26E-02	3.49E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.73E+02	1.93E+00	1.93E+02	1.93E+01	1.93E+01	90.53%	87.86%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	6.37E-01	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	1.50E-03	0.00E+00	0.00E+00	5.46E-03	0.00E+00	1.34E-03	0.00E+00	2.66E-04	0.00E+00	8.57E-03	1.25E-01	6.86E-02	1.25E+00	6.86E-03	0.03%	0.03%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.07E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	7.24E-06	0.00E+00	0.00E+00	3.65E-04	0.00E+00	1.51E-05	0.00E+00	8.87E-06	0.00E+00	3.96E-04	6.85E-02	5.79E-03	6.85E-01	5.79E-04	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.42E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.35E-06	0.00E+00	0.00E+00	1.69E-04	0.00E+00	4.32E-07	0.00E+00	4.10E-06	0.00E+00	1.77E-04	6.80E-02	2.60E-03	6.90E-01	2.56E-04	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	5.10E-02	mg/kg	4.11E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	1.20E-04	9.69E-06	0.00E+00	8.40E-03	5.01E-04	0.00E+00	1.09E-06	0.00E+00	1.09E-05	0.00E+00	9.05E-03	6.80E-02	1.33E-01	6.90E-01	1.31E-02	0.06%	0.06%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	7.47E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	1.76E-05	0.00E+00	0.00E+00	9.59E-04	0.00E+00	1.02E-06	0.00E+00	3.60E-05	0.00E+00	1.01E-03	6.80E-02	1.49E-02	6.90E-01	1.47E-03	0.01%	0.01%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.50E-04	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.01E-06	0.00E+00	0.00E+00	8.96E-05	0.00E+00	1.35E-05	0.00E+00	2.46E-06	0.00E+00	1.08E-04	6.80E-02	1.58E-03	6.90E-01	1.56E-04	0.00%	0.00%
Barium	0.00E+00	mg/L	1.34E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	3.15E-01	0.00E+00	0.00E+00	4.53E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.85E+00	5.10E+00	9.50E-01	1.98E+01	2.45E-01	0.45%	1.11%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	6.80E-02	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.60E-04	0.00E+00	0.00E+00	6.79E-03	0.00E+00	6.58E-03	0.00E+00	1.97E-04	0.00E+00	1.37E-02	4.00E+00	3.43E-03	4.00E+01	3.43E-04	0.00%	0.00%
bis(2-ethylhexyl)phthalate	2.43E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	2.00E-03	0.00E+00	0.00E+00	9.44E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.64E-02	1.83E+01	5.26E-03	1.83E+02	5.27E-04	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	mg/L	5.24E-01	mg/kg	3.84E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.58E+01	8.28E-01	9.52E-01	9.52E-01	9.22E-01	9.22E-01	0.00E+00	1.24E-03	9.05E-04	0.00E+00	3.15E-02	7.46E-02	0.00E+00	1.10E-02	0.00E+00	8.88E-04	0.00E+00	1.20E-01	1.00E+00	1.20E-01	1.00E+01	1.20E-02	0.06%	0.05%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.88E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.42E-07	0.00E+00	0.00E+00	2.22E-05	0.00E+00	2.28E-07	0.00E+00	5.42E-07	0.00E+00	2.35E-05	4.58E+00	5.12E-06	9.16E+00	2.56E-06	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.22E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	0.00E+00	0.00E+00	2.89E-02	0.00E+00	0.00E+00	2.91E-01	0.00E+00	1.77E-01	0.00E+00	1.02E-02	0.00E+00	5.07E-01	3.28E+00	1.55E-01	1.31E+01	3.86E-02	0.07%	0.18%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	5.84E-07	0.00E+00	0.00E+00	2.94E-05	0.00E+00	3.01E-07	0.00E+00	7.16E-07	0.00E+00	3.10E-05	4.58E+00	6.76E-06	9.16E+00	3.38E-06	0.00%	0.00%
Copper	1.42E-02	mg/L	1.27E+01	mg/kg	7.43E+00	mg/kg	1.00E+00	5.92E+03	5.25E+00	1.32E+00	4.15E-01	5.75E-01	5.75E-01	1.49E-01	1.49E-01	1.17E-03	2.99E-02	1.75E-02	2.10E-01	5.00E-01	7.37E-02	0.00E+00	1.29E-01	0.00E+00	2.79E-03	0.00E+00	9.64E-01	1.17E+01	8.24E-02	1.51E+01	6.37E-02	0.04%	0.29%
Dieldrin	0.00E+00	mg/L	3.00E-03	mg/kg	1.86E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	7.07E-06	4.38E-07	0.00E+00	1.31E-04	2.13E-05	0.00E+00	9.16E-06	0.00E+00	5.37E-07	0.00E+00	1.69E-04	2.00E-02	8.47E-03	2.00E-01	8.47E-04	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.75E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	6.49E-07	0.00E+00	0.00E+00	3.16E-05	0.00E+00	3.17E-07	0.00E+00	8.40E-07	0.00E+00	3.34E-05	9.20E-02	3.64E-04	9.20E-01	3.64E-05	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.20E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	5.20E-07	0.00E+00	0.00E+00	2.57E-05	0.00E+00	1.25E-07	0.00E+00	6.37E-07	0.00E+00	2.70E-05	8.00E-02	3.38E-04	2.90E-01	9.32E-05	0.00%	0.00%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	3.14E+00	mg/L	0.00E+00	mg/kg	1.00E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	2.59E-01	0.00E+00	2.37E+01	7.88E+00	0.00E+00	5.89E+00	0.00E+00	1.21E+00	0.00E+00	5.21E-02	0.00E+00	3.90E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	7.76E-03	mg/L	7.66E+01	mg/kg	2.51E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	4.39E-01	3.92E-02	6.40E-02	6.40E-02	1.33E-02	1.33E-02	6.39E-04	1.81E-01	5.93E-02	2.92E-02	3.50E-01	8.31E-02	0.00E+00	4.84E-02	0.00E+00	8.39E-04	0.00E+00	7.52E-01	8.00E+00	9.40E-02	8.00E+01	9.40E-03	0.04%	0.04%
Manganese	2.73E-01	mg/L	0.00E+00	mg/kg	9.35E+02	mg/kg	1.00E+00	2.00E+03	2.10E+00	2.21E-01	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	2.25E-02	0.00E+00	2.21E+00	1.37E+00	0.00E+00	1.56E+00	0.00E+00	2.82E+00	0.00E+00	2.25E-02	0.00E+00	7.99E+00	8.80E+01	9.08E-02	2.84E+02	2.81E-02	0.04%	0.13%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.95E-02	mg/kg	1.00E+00		2.87E+00	7.16E+00	NA	1.35E+00	1.35E+00	1.03E-01	1.03E-01	0.00E+00	0.00E+00	1.40E-04	0.00E+00	0.00E+00	3.21E-03	NA	2.41E-03	0.00E+00	1.54E-05	0.00E+00	5.78E-03	1.00E+00	5.78E-03	3.00E+00	1.93E-03	0.00%	0.01%
Mercury (methyl)	0.00E+00	mg/L	2.65E-01	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	6.78E-01	NA	NA			0.00E+00	6.24E-04	0.00E+00	0.00E+00	5.71E-03	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	6.33E-03	1.50E-02	4.22E-01	2.50E-02	2.53E-01	0.20%	1.15%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.41E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	8.05E-07	0.00E+00	0.00E+00	4.17E-05	0.00E+00	3.53E-07	0.00E+00	9.87E-07	0.00E+00	4.38E-05	7.00E-02	6.26E-04	7.00E-01	6.26E-05	0.00%	0.00%
Nickel	0.00E+00	mg/L	0.00E+00	mg/kg	7.10E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	NA	6.65E-02	6.65E-02	1.01E-01	1.01E-01	0.00E+00	0.00E+00	1.68E-02	0.00E+00	0.00E+00	2.53E-01	NA	1.42E-02	0.00E+00	1.80E-03	0.00E+00	2.86E-01	4.00E+01	7.14E-03	8.00E+01	3.57E-03	0.00%	0.02%
Nitrate	8.86E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	7.30E-02	0.00E+00	0.00E+00	2.37E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.45E+00	5.07E+02	4.83E-03	1.13E+03	2.17E-03	0.00%	0.01%
Nitrate/Nitrite	8.12E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03								6.69E-03	0.00E+00	0.00E+00	2.17E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.24E-01	5.07E+02	4.42E-04	1.13E+03	1.98E-04	0.00%	0.00%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.15E-07	0.00E+00	0.00E+00	2.02E-05	0.00E+00	1.39E-07	0.00E+00	5.08E-07	0.00E+00	2.13E-05	4.58E+00	4.65E-06	9.16E+00	2.32E-06	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	8.83E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.08E-06	0.00E+00	0.00E+00	1.01E-04	0.00E+00	8.90E-07	0.00E+00	2.55E-06	0.00E+00	1.06E-04	2.40E-01	4.43E-04	2.40E+00	4.43E-05	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	4.23E-01	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	9.97E-04	0.00E+00	0.00E+00	4.72E-02	0.00E+00	8.97E-04	0.00E+00	1.22E-03	0.00E+00	5.04E-02	2.40E-01	2.10E-01	2.40E+00	2.10E-02	0.10%	0.10%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.80E-01	mg/kg	1.00E+00			1.14E+00	NA	1.88E+01	1.88E+01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	6.60E-04	0.00E+00	0.00E+00	2.40E-03	NA	1.58E-01	0.00E+00	1.17E-04	0.00E+00	1.62E-01	8.50E+00	1.90E-02	2.55E+01	6.33E-03	0.01%	0.03%
Selenium	3.74E-03	mg/L	1.29E+00	mg/kg	4.13E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.18E+00	5.20E-01	4.64E-01	4.64E-01	1.95E-01	1.95E-01	3.08E-04	3.04E-03	9.73E-04	1.92E-03	4.37E-02	3.66E-03	0.00E+00	5.76E-03	0.00E+00	2.02E-04	0.00E+00	5.96E-02	2.00E-01	2.98E-01	3.30E-01	1.80E-01	0.14%	0.82%
Silver	0.00E+00	mg/L	2.66E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	6.27E-03	0.00E+00	0.00E+00	9.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.63E-02	1.90E+01	5.07E-03	5.70E+01	1.69E-03	0.00%	0.01%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	3.37E-02	0.00E+00	0.00E+00	2.99E-02	0.00E+00	1.50E-01	0.00E+00	5.95E-03	0.00E+00	2.20E-01	2.63E+02	8.36E-04	7.89E+02	2.79E-04	0.00%	0.00%
Sulfate	1.42E+01	mg/L	6.05E+00	mg/kg	2.30E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	1.17E+00	1.43E-02	5.42E-01	3.82E+01	9.56E-02	1.97E+00	0.00E+00	2.42E+00	0.00E+00	9.59E-02	0.00E+00	4.45E+01	NA	NA	NA	NA	NA	NA
Thallium	1.70E-03	mg/L	7.02E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00							1.40E-04	1.66E-03	0.00E+00	6.78E-02	2.38E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.34E-02	7.40E-03	1.26E+01	7.40E-02	1.26E+00	5.91%	5.74%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.04E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	7.16E-07	0.00E+00	0.00E+00	3.60E-05	0.00E+00	3.68E-07	0.00E+00	8.77E-07	0.00E+00	3.80E-05	4.58E+00	8.29E-06	9.16E+00	4.14E-06	0.00%	0.00%
Vanadium	0.00E+00	mg/L	0.00E+00	mg/kg	1.53E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	0.00E+00	0.00E+00	3.62E-02	0.00E+00	0.00E+00	1.02E-02	0.00E+00	1.85E-03	0.00E+00	2.28E-04	0.00E+00	4.84E-02	2.10E-01	2.30E-01	2.10E+00	2.30E-02	0.11%	0.10%
Zinc	8.78E-02	mg/L	9.41E+01	mg/kg	5.89E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.53E+00	6.57E-01	8.08E-01	8.08E-01	4.51E-01	4.51E-01	7.23E-03	2.22E-01	1.39E-01	1.10E+00	5.33E+00	2.45E+00	0.00E+00	1.43E+00	0.00E+00	6.66E-02	0.00E+00	1.07E+01	1.60E+02	6.72E-02	3.20E+02	3.36E-02	0.03%	0.15%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	3.5E-05	1.8E-05	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	1.4E-03	2.8E-04	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.6E-01	1.6E-02	0.07%	0.07%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	5.3E-03	5.3E-04	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	9.0E-03	9.1E-04	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi \, x \, Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text tables.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0.6	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.05	unitless
Aq. Invert diet fraction =	0.15	unitless
Terr. Invert diet fraction =	0.15	unitless
Mammal diet fraction =	0.05	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.01363	kg/d
Sediment ingestion rate =	0.01363	kg/d
Food ingestion rate =	0.29	kg/d
Body weight =	5.78	kg
Home range =	13.09653	acres
Water intake rate =	0.476	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-56
Tier 2 COPCs
EEQs and Hazard Indices for the Raccoon at LHAAP
Low Impact Sub-Area/Goose Praire Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							--------Unitless	--------	--------	--------	--------	--------	--------	--------	--------	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	7.00E-09	mg/L	1.27E-06	mg/kg	3.18E-06	mg/kg	#######	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	5.76E-10	2.99E-09	7.51E-09	4.05E-07	4.46E-08	2.64E-07	0.00E+00	3.71E-10	0.00E+00	3.77E-10	0.00E+00	7.26E-07	1.00E-06	7.26E-01	1.00E-05	7.26E-02	0.42%	0.41%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	mg/L	2.56E-03	mg/kg	8.00E-04	mg/kg	#######		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	6.03E-06	1.89E-06	0.00E+00	8.09E-06	5.39E-05	0.00E+00	6.75E-07	0.00E+00	1.76E-06	0.00E+00	7.24E-05	8.00E-01	9.04E-05	4.00E+00	1.81E-05	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	3.10E-03	mg/kg	#######		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	7.31E-06	0.00E+00	0.00E+00	2.10E-04	0.00E+00	1.27E-05	0.00E+00	7.33E-06	0.00E+00	2.37E-04	8.00E-01	2.97E-04	4.00E+00	5.93E-05	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	2.61E-03	mg/kg	1.07E-03	mg/kg	#######		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	6.16E-06	2.52E-06	0.00E+00	3.30E-05	7.46E-05	0.00E+00	9.00E-07	0.00E+00	2.38E-06	0.00E+00	1.20E-04	8.00E-01	1.49E-04	4.00E+00	2.99E-05	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	#######			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.15E-07	0.00E+00	0.00E+00	1.23E-05	0.00E+00	2.58E-08	0.00E+00	3.87E-07	0.00E+00	1.31E-05	2.00E-01	6.55E-05	1.00E+00	1.31E-05	0.00%	0.00%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.15E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	7.43E-07	0.00E+00	0.00E+00	2.16E-05	0.00E+00	8.85E-08	0.00E+00	6.93E-07	0.00E+00	2.31E-05	4.58E+00	5.04E-06	9.16E+00	2.52E-06	0.00%	0.00%
Aluminum	1.73E+00	mg/L	8.98E+03	mg/kg	0.00E+00	mg/kg	#######	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	1.42E-01	2.12E+01	0.00E+00	1.87E-02	3.04E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.25E+02	1.93E+00	1.69E+02	1.93E+01	1.69E+01	96.74%	94.58%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-01	mg/kg	#######			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	1.20E-03	0.00E+00	0.00E+00	1.15E-03	0.00E+00	5.67E-04	0.00E+00	1.42E-04	0.00E+00	3.06E-03	1.25E-01	2.45E-02	1.25E+00	2.45E-03	0.01%	0.01%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.55E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	6.02E-06	0.00E+00	0.00E+00	1.75E-04	0.00E+00	6.44E-07	0.00E+00	5.61E-06	0.00E+00	1.87E-04	6.85E-02	2.73E-03	6.85E-01	2.73E-04	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.21E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.85E-06	0.00E+00	0.00E+00	8.29E-05	0.00E+00	3.05E-07	0.00E+00	2.66E-06	0.00E+00	8.87E-05	6.80E-02	1.30E-03	6.90E-01	1.29E-04	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	4.20E-02	mg/kg	3.32E-03	mg/kg	#######		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	9.90E-05	7.82E-06	0.00E+00	1.48E-03	2.33E-04	0.00E+00	3.57E-07	0.00E+00	4.14E-06	0.00E+00	1.82E-03	6.80E-02	2.68E-02	6.90E-01	2.64E-03	0.02%	0.01%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	4.07E-03	mg/kg	#######			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	9.60E-06	0.00E+00	0.00E+00	3.01E-04	0.00E+00	7.88E-08	0.00E+00	1.71E-05	0.00E+00	3.28E-04	6.80E-02	4.82E-03	6.90E-01	4.75E-04	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	7.92E-04	mg/kg	#######			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.87E-06	0.00E+00	0.00E+00	4.81E-05	0.00E+00	1.26E-05	0.00E+00	1.74E-06	0.00E+00	6.43E-05	6.80E-02	9.46E-04	6.90E-01	9.32E-05	0.00%	0.00%
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	0.00E+00	mg/kg	#######	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	2.78E-01	0.00E+00	0.00E+00	4.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.28E+00	5.10E+00	8.39E-01	1.98E+01	2.16E-01	0.48%	1.21%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	5.10E-02	mg/kg	#######			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.20E-04	0.00E+00	0.00E+00	2.94E-03	0.00E+00	4.94E-03	0.00E+00	1.12E-04	0.00E+00	8.10E-03	4.00E+00	2.03E-03	4.00E+01	2.03E-04	0.00%	0.00%
bis(2-ethylhexyl)phthalate	1.43E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	1.18E-03	0.00E+00	0.00E+00	2.56E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E-02	1.83E+01	1.46E-03	1.83E+02	1.46E-04	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	mg/L	4.84E-01	mg/kg	3.02E-01	mg/kg	#######	1.15E+03	6.00E-01	2.87E+01	8.58E-01	1.06E+00	1.06E+00	6.72E-01	6.72E-01	0.00E+00	1.14E-03	7.13E-04	0.00E+00	2.19E-03	6.54E-02	0.00E+00	9.65E-03	0.00E+00	5.10E-04	0.00E+00	7.96E-02	1.00E+00	7.96E-02	1.00E+01	7.96E-03	0.05%	0.04%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.08E-07	0.00E+00	0.00E+00	1.18E-05	0.00E+00	4.86E-08	0.00E+00	3.80E-07	0.00E+00	1.27E-05	4.58E+00	2.77E-06	9.16E+00	1.38E-06	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E+01	mg/kg	#######	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	0.00E+00	0.00E+00	2.60E-02	0.00E+00	0.00E+00	2.54E-02	0.00E+00	1.36E-02	0.00E+00	2.34E-03	0.00E+00	6.73E-02	3.28E+00	2.05E-02	1.31E+01	5.12E-03	0.01%	0.03%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	5.00E-07	0.00E+00	0.00E+00	1.45E-05	0.00E+00	5.95E-08	0.00E+00	4.66E-07	0.00E+00	1.55E-05	4.58E+00	3.39E-06	9.16E+00	1.70E-06	0.00%	0.00%
Copper	1.23E-02	mg/L	1.08E+01	mg/kg	6.53E+00	mg/kg	#######	1.11E+03	1.56E+00	1.45E+00	4.57E-01	6.22E-01	6.22E-01	8.97E-02	8.97E-02	1.01E-03	2.55E-02	1.54E-02	3.42E-02	1.27E-01	7.14E-02	0.00E+00	1.22E-01	0.00E+00	1.47E-03	0.00E+00	3.98E-01	1.17E+01	3.41E-02	1.51E+01	2.63E-02	0.02%	0.15%
Dieldrin	0.00E+00	mg/L	2.57E-03	mg/kg	1.72E-04	mg/kg	#######		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	6.06E-06	4.05E-07	0.00E+00	1.12E-04	1.14E-05	0.00E+00	1.24E-07	0.00E+00	3.78E-07	0.00E+00	1.31E-04	2.00E-02	6.53E-03	2.00E-01	6.53E-04	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-04	mg/kg	#######			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	5.61E-07	0.00E+00	0.00E+00	1.58E-05	0.00E+00	1.96E-07	0.00E+00	7.24E-07	0.00E+00	1.72E-05	9.20E-02	1.87E-04	9.20E-01	1.87E-05	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.93E-04	mg/kg	#######			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.55E-07	0.00E+00	0.00E+00	1.30E-05	0.00E+00	9.23E-08	0.00E+00	4.24E-07	0.00E+00	1.40E-05	8.00E-02	1.75E-04	2.90E-01	4.82E-05	0.00%	0.00%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	2.68E+00	mg/L	0.00E+00	mg/kg	9.10E+03	mg/kg	#######	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	2.21E-01	0.00E+00	2.15E+01	1.68E+00	0.00E+00	2.47E+00	0.00E+00	1.10E+00	0.00E+00	4.01E-02	0.00E+00	2.70E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	6.26E-03	mg/L	5.97E+01	mg/kg	2.21E+01	mg/kg	#######	4.48E+02	7.10E-02	4.50E-01	4.37E-02	6.78E-02	6.78E-02	1.16E-02	1.16E-02	5.15E-04	1.41E-01	5.21E-02	7.03E-03	3.19E-02	7.48E-02	0.00E+00	4.50E-02	0.00E+00	6.45E-04	0.00E+00	3.53E-01	8.00E+00	4.41E-02	8.00E+01	4.41E-03	0.03%	0.02%
Manganese	2.12E-01	mg/L	0.00E+00	mg/kg	8.30E+02	mg/kg	#######	2.50E+02	4.20E-01	2.26E-01	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	1.75E-02	0.00E+00	1.96E+00	1.33E-01	0.00E+00	1.41E+00	0.00E+00	1.97E+00	0.00E+00	1.58E-02	0.00E+00	5.51E+00	8.80E+01	6.26E-02	2.84E+02	1.94E-02	0.04%	0.11%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-02	mg/kg	#######		1.14E+00	7.64E+00	NA	1.41E+00	1.41E+00	9.15E-02	9.15E-02	0.00E+00	0.00E+00	1.27E-04	0.00E+00	0.00E+00	3.11E-03	NA	2.29E-03	0.00E+00	1.24E-05	0.00E+00	5.54E-03	1.00E+00	5.54E-03	3.00E+00	1.85E-03	0.00%	0.01%
Mercury (methyl)	0.00E+00	mg/L	2.09E-01	mg/kg	0.00E+00	mg/kg	#######		1.14E+00	NA	7.56E-01	NA	NA			0.00E+00	4.92E-04	0.00E+00	0.00E+00	1.78E-03	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	2.28E-03	1.50E-02	1.52E-01	2.50E-02	9.11E-02	0.09%	0.51%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.88E-04	mg/kg	#######			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	6.80E-07	0.00E+00	0.00E+00	2.03E-05	0.00E+00	2.99E-08	0.00E+00	6.34E-07	0.00E+00	2.17E-05	7.00E-02	3.09E-04	7.00E-01	3.09E-05	0.00%	0.00%
Nickel	0.00E+00	mg/L	0.00E+00	mg/kg	6.36E+00	mg/kg	#######		4.86E-01	1.06E+00	NA	6.84E-02	6.84E-02	8.71E-02	8.71E-02	0.00E+00	0.00E+00	1.50E-02	0.00E+00	0.00E+00	5.07E-02	NA	1.31E-02	0.00E+00	1.39E-03	0.00E+00	8.02E-02	4.00E+01	2.00E-03	8.00E+01	1.00E-03	0.00%	0.01%
Nitrate	4.70E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	3.87E-02	0.00E+00	0.00E+00	3.55E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.94E-01	5.07E+02	7.76E-04	1.13E+03	3.48E-04	0.00%	0.00%
Nitrate/Nitrite	6.18E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	3.01E+02								5.09E-03	0.00E+00	0.00E+00	4.67E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.18E-02	5.07E+02	1.02E-04	1.13E+03	4.58E-05	0.00%	0.00%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E-04	mg/kg	#######			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.02E-07	0.00E+00	0.00E+00	1.13E-05	0.00E+00	1.35E-07	0.00E+00	3.75E-07	0.00E+00	1.22E-05	4.58E+00	2.67E-06	9.16E+00	1.34E-06	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.62E-04	mg/kg	#######			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.32E-06	0.00E+00	0.00E+00	3.70E-05	0.00E+00	4.64E-07	0.00E+00	1.24E-06	0.00E+00	4.00E-05	2.40E-01	1.67E-04	2.40E+00	1.67E-05	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-01	mg/kg	#######			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	5.84E-04	0.00E+00	0.00E+00	1.60E-02	0.00E+00	3.17E-04	0.00E+00	5.44E-04	0.00E+00	1.74E-02	2.40E-01	7.25E-02	2.40E+00	7.25E-03	0.04%	0.04%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	7.70E-02	mg/kg	#######			3.00E-01	NA	3.19E+01	3.19E+01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	1.82E-04	0.00E+00	0.00E+00	1.74E-04	NA	7.40E-02	0.00E+00	2.14E-05	0.00E+00	7.44E-02	8.50E+00	8.75E-03	2.55E+01	2.92E-03	0.01%	0.02%
Selenium	3.23E-03	mg/L	1.10E+00	mg/kg	3.74E-01	mg/kg	#######	2.05E+02	4.50E+00	1.21E+00	5.12E-01	4.59E-01	4.59E-01	1.51E-01	1.51E-01	2.66E-04	2.60E-03	8.81E-04	1.66E-03	3.73E-02	3.40E-03	0.00E+00	5.16E-03	0.00E+00	1.42E-04	0.00E+00	5.14E-02	2.00E-01	2.57E-01	3.30E-01	1.56E-01	0.15%	0.87%
Silver	0.00E+00	mg/L	2.05E+00	mg/kg	0.00E+00	mg/kg	#######		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	4.83E-03	0.00E+00	0.00E+00	6.94E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.42E-02	1.90E+01	3.91E-03	5.70E+01	1.30E-03	0.00%	0.01%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.30E+01	mg/kg	#######		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	3.06E-02	0.00E+00	0.00E+00	8.50E-03	0.00E+00	8.21E-02	0.00E+00	3.61E-03	0.00E+00	1.25E-01	2.63E+02	4.75E-04	7.89E+02	1.58E-04	0.00%	0.00%
Sulfate	1.10E+01	mg/L	4.59E+00	mg/kg	1.30E+02	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	9.07E-01	1.08E-02	3.07E-01	8.31E+00	1.45E-02	2.94E-01	0.00E+00	8.22E-01	0.00E+00	3.61E-02	0.00E+00	1.07E+01	NA	NA	NA	NA	NA	NA
Thallium	1.00E-03	mg/L	6.22E-01	mg/kg	0.00E+00	mg/kg	#######	7.50E+01	4.50E+00							8.25E-05	1.47E-03	0.00E+00	1.89E-04	2.11E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.28E-02	7.40E-03	3.08E+00	7.40E-02	3.08E-01	1.77%	1.73%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	5.96E-07	0.00E+00	0.00E+00	1.73E-05	0.00E+00	7.09E-08	0.00E+00	5.55E-07	0.00E+00	1.85E-05	4.58E+00	4.04E-06	9.16E+00	2.02E-06	0.00%	0.00%
Vanadium	0.00E+00	mg/L	0.00E+00	mg/kg	1.45E+01	mg/kg	#######	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	0.00E+00	0.00E+00	3.41E-02	0.00E+00	0.00E+00	4.57E-03	0.00E+00	1.57E-03	0.00E+00	1.99E-04	0.00E+00	4.05E-02	2.10E-01	1.93E-01	2.10E+00	1.93E-02	0.11%	0.11%
Zinc	6.50E-02	mg/L	7.78E+01	mg/kg	4.79E+01	mg/kg	#######	2.91E+03	1.94E+00	6.34E+00	7.15E-01	8.84E-01	8.84E-01	1.84E-01	1.84E-01	5.35E-03	1.84E-01	1.13E-01	4.75E-01	1.13E+00	2.29E+00	0.00E+00	1.28E+00	0.00E+00	2.22E-02	0.00E+00	5.50E+00	1.60E+02	3.44E-02	3.20E+02	1.72E-02	0.02%	0.10%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.8E-05	9.0E-06	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	5.4E-04	1.1E-04	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	3.7E-02	3.6E-03	0.02%	0.02%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	1.5E-03	1.5E-04	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	6.8E-03	6.8E-04	0.00%	0.00%

Intake Equation:

$$E_j = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0.6	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.05	unitless
Aq. Invert diet fraction =	0.15	unitless
Terr. Invert diet fraction =	0.15	unitless
Mammal diet fraction =	0.05	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.01363	kg/d
Sediment ingestion rate =	0.01363	kg/d
Food ingestion rate =	0.29	kg/d
Body weight =	5.78	kg
Home range =	637.5293	acres
Water intake rate =	0.476	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-57
Tier 1 COPCs
EEQs and Hazard Indices for the Raccoon-Louisiana Black Bear at LHAAP
Low Impact Sub-Area/Goose Praire Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							-----Unitless								-----Unitless-----	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+01	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	8.59E-09	mg/L	1.56E-06	mg/kg	3.95E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	7.07E-10	6.46E-10	1.63E-09	2.16E-06	1.52E-07	3.89E-07	0.00E+00	3.19E-10	0.00E+00	3.56E-10	0.00E+00	2.70E-06	1.00E-06	2.70E+00	1.00E-05	2.70E-01	2.24%	2.18%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	mg/L	2.97E-03	mg/kg	1.40E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	1.23E-06	5.80E-07	0.00E+00	5.54E-06	9.65E-05	0.00E+00	1.99E-06	0.00E+00	2.39E-06	0.00E+00	1.08E-04	8.00E-01	1.35E-04	4.00E+00	2.71E-05	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	4.30E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	1.78E-06	0.00E+00	0.00E+00	2.98E-04	0.00E+00	4.73E-05	0.00E+00	6.32E-06	0.00E+00	3.53E-04	8.00E-01	4.41E-04	4.00E+00	8.83E-05	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	3.04E-03	mg/kg	2.23E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	1.26E-06	9.23E-07	0.00E+00	2.27E-05	1.59E-04	0.00E+00	3.17E-06	0.00E+00	5.48E-06	0.00E+00	1.93E-04	8.00E-01	2.41E-04	4.00E+00	4.82E-05	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.87E-04	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	7.75E-08	0.00E+00	0.00E+00	1.33E-05	0.00E+00	2.25E-08	0.00E+00	3.19E-07	0.00E+00	1.38E-05	2.00E-01	6.88E-05	1.00E+00	1.38E-05	0.00%	0.00%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.76E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.56E-07	0.00E+00	0.00E+00	2.63E-05	0.00E+00	2.69E-07	0.00E+00	6.41E-07	0.00E+00	2.74E-05	4.58E+00	5.98E-06	9.16E+00	2.99E-06	0.00%	0.00%
Aluminum	2.10E+00	mg/L	1.03E+04	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	1.73E-01	4.26E+00	0.00E+00	1.33E-02	2.06E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+02	1.93E+00	1.09E+02	1.93E+01	1.09E+01	90.31%	87.68%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	6.37E-01	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	2.64E-04	0.00E+00	0.00E+00	3.22E-03	0.00E+00	7.91E-04	0.00E+00	1.57E-04	0.00E+00	4.43E-03	1.25E-01	3.55E-02	1.25E+00	3.55E-03	0.03%	0.03%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.07E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.27E-06	0.00E+00	0.00E+00	2.15E-04	0.00E+00	8.88E-06	0.00E+00	5.23E-06	0.00E+00	2.31E-04	6.85E-02	3.37E-03	6.85E-01	3.37E-04	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.42E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	5.88E-07	0.00E+00	0.00E+00	9.96E-05	0.00E+00	2.55E-07	0.00E+00	2.42E-06	0.00E+00	1.03E-04	6.80E-02	1.51E-03	6.90E-01	1.49E-04	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	5.10E-02	mg/kg	4.11E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	2.11E-05	1.70E-06	0.00E+00	4.96E-03	2.96E-04	0.00E+00	6.45E-07	0.00E+00	6.46E-06	0.00E+00	5.28E-03	6.80E-02	7.77E-02	6.90E-01	7.65E-03	0.06%	0.06%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	7.47E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	3.09E-06	0.00E+00	0.00E+00	5.65E-04	0.00E+00	6.03E-07	0.00E+00	2.12E-05	0.00E+00	5.90E-04	6.80E-02	8.68E-03	6.90E-01	8.55E-04	0.01%	0.01%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.50E-04	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.52E-07	0.00E+00	0.00E+00	5.28E-05	0.00E+00	7.94E-06	0.00E+00	1.45E-06	0.00E+00	6.26E-05	6.80E-02	9.20E-04	6.90E-01	9.07E-05	0.00%	0.00%
Barium	0.00E+00	mg/L	1.34E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	5.54E-02	0.00E+00	0.00E+00	2.67E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.73E+00	5.10E+00	5.35E-01	1.98E+01	1.38E-01	0.44%	1.11%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	6.80E-02	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.82E-05	0.00E+00	0.00E+00	4.00E-03	0.00E+00	3.88E-03	0.00E+00	1.16E-04	0.00E+00	8.03E-03	4.00E+00	2.01E-03	4.00E+01	2.01E-04	0.00%	0.00%
bis(2-ethylhexyl)phthalate	2.43E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	2.00E-03	0.00E+00	0.00E+00	5.57E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.77E-02	1.83E+01	3.15E-03	1.83E+02	3.15E-04	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	mg/L	5.24E-01	mg/kg	3.84E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.58E+01	8.28E-01	9.52E-01	9.52E-01	9.22E-01	9.22E-01	0.00E+00	2.17E-04	1.59E-04	0.00E+00	1.86E-02	4.40E-02	0.00E+00	6.49E-03	0.00E+00	5.24E-04	0.00E+00	6.99E-02	1.00E+00	6.99E-02	1.00E+01	6.99E-03	0.06%	0.06%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.88E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	7.77E-08	0.00E+00	0.00E+00	1.31E-05	0.00E+00	1.34E-07	0.00E+00	3.20E-07	0.00E+00	1.36E-05	4.58E+00	2.98E-06	9.16E+00	1.49E-06	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.22E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	0.00E+00	0.00E+00	5.07E-03	0.00E+00	0.00E+00	1.72E-01	0.00E+00	1.04E-01	0.00E+00	6.04E-03	0.00E+00	2.87E-01	3.28E+00	8.76E-02	1.31E+01	2.19E-02	0.07%	0.18%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.03E-07	0.00E+00	0.00E+00	1.73E-05	0.00E+00	1.77E-07	0.00E+00	4.22E-07	0.00E+00	1.80E-05	4.58E+00	3.93E-06	9.16E+00	1.97E-06	0.00%	0.00%
Copper	1.42E-02	mg/L	1.27E+01	mg/kg	7.43E+00	mg/kg	1.00E+00	5.92E+03	5.25E+00	1.32E+00	4.15E-01	5.75E-01	5.75E-01	1.49E-01	1.49E-01	1.17E-03	5.24E-03	3.08E-03	1.24E-01	2.95E-01	4.34E-02	0.00E+00	7.58E-02	0.00E+00	1.64E-03	0.00E+00	5.49E-01	1.17E+01	4.70E-02	1.51E+01	3.63E-02	0.04%	0.29%
Dieldrin	0.00E+00	mg/L	3.00E-03	mg/kg	1.86E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	1.24E-06	7.69E-08	0.00E+00	7.71E-05	1.26E-05	0.00E+00	5.40E-06	0.00E+00	3.16E-07	0.00E+00	9.68E-05	2.00E-02	4.84E-03	2.00E-01	4.84E-04	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.75E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	1.14E-07	0.00E+00	0.00E+00	1.87E-05	0.00E+00	1.87E-07	0.00E+00	4.96E-07	0.00E+00	1.95E-05	9.20E-02	2.11E-04	9.20E-01	2.11E-05	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.20E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	9.13E-08	0.00E+00	0.00E+00	1.52E-05	0.00E+00	7.39E-08	0.00E+00	3.76E-07	0.00E+00	1.57E-05	8.00E-02	1.96E-04	2.90E-01	5.42E-05	0.00%	0.00%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	3.14E+00	mg/L	0.00E+00	mg/kg	1.00E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	2.59E-01	0.00E+00	4.16E+00	4.65E+00	0.00E+00	3.47E+00	0.00E+00	7.12E-01	0.00E+00	3.07E-02	0.00E+00	1.33E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	7.76E-03	mg/L	7.66E+01	mg/kg	2.51E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	4.39E-01	3.92E-02	6.40E-02	6.40E-02	1.33E-02	1.33E-02	6.39E-04	3.17E-02	1.04E-02	1.72E-02	2.06E-01	4.90E-02	0.00E+00	2.86E-02	0.00E+00	4.95E-04	0.00E+00	3.44E-01	8.00E+00	4.30E-02	8.00E+01	4.30E-03	0.04%	0.03%
Manganese	2.73E-01	mg/L	0.00E+00	mg/kg	9.35E+02	mg/kg	1.00E+00	2.00E+03	2.10E+00	2.21E-01	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	2.25E-02	0.00E+00	3.87E-01	8.08E-01	0.00E+00	9.17E-01	0.00E+00	1.66E+00	0.00E+00	1.32E-02	0.00E+00	3.81E+00	8.80E+01	4.33E-02	2.84E+02	1.34E-02	0.04%	0.11%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.95E-02	mg/kg	1.00E+00		2.87E+00	7.16E+00	NA	1.35E+00	1.35E+00	1.03E-01	1.03E-01	0.00E+00	0.00E+00	2.47E-05	0.00E+00	0.00E+00	1.89E-03	NA	1.42E-03	0.00E+00	9.07E-06	0.00E+00	3.35E-03	1.00E+00	3.35E-03	3.00E+00	1.12E-03	0.00%	0.01%
Mercury (methyl)	0.00E+00	mg/L	2.65E-01	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	6.78E-01	NA	NA			0.00E+00	1.10E-04	0.00E+00	0.00E+00	3.37E-03	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	3.48E-03	1.50E-02	2.32E-01	2.50E-02	1.39E-01	0.19%	1.12%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.41E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.41E-07	0.00E+00	0.00E+00	2.46E-05	0.00E+00	2.08E-07	0.00E+00	5.82E-07	0.00E+00	2.55E-05	7.00E-02	3.65E-04	7.00E-01	3.65E-05	0.00%	0.00%
Nickel	0.00E+00	mg/L	0.00E+00	mg/kg	7.10E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	NA	6.65E-02	6.65E-02	1.01E-01	1.01E-01	0.00E+00	0.00E+00	2.94E-03	0.00E+00	0.00E+00	1.49E-01	NA	8.39E-03	0.00E+00	1.06E-03	0.00E+00	1.62E-01	4.00E+01	4.04E-03	8.00E+01	2.02E-03	0.00%	0.02%
Nitrate	8.86E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	7.30E-02	0.00E+00	0.00E+00	1.40E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.47E+00	5.07E+02	2.90E-03	1.13E+03	1.30E-03	0.00%	0.01%
Nitrate/Nitrite	8.12E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03								6.69E-03	0.00E+00	0.00E+00	1.28E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.35E-01	5.07E+02	2.66E-04	1.13E+03	1.19E-04	0.00%	0.00%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	7.28E-08	0.00E+00	0.00E+00	1.19E-05	0.00E+00	8.22E-08	0.00E+00	3.00E-07	0.00E+00	1.24E-05	4.58E+00	2.70E-06	9.16E+00	1.35E-06	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	8.83E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.66E-07	0.00E+00	0.00E+00	5.95E-05	0.00E+00	5.25E-07	0.00E+00	1.51E-06	0.00E+00	6.19E-05	2.40E-01	2.58E-04	2.40E+00	2.58E-05	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	4.23E-01	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.75E-04	0.00E+00	0.00E+00	2.79E-02	0.00E+00	5.29E-04	0.00E+00	7.20E-04	0.00E+00	2.93E-02	2.40E-01	1.22E-01	2.40E+00	1.22E-02	0.10%	0.10%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.80E-01	mg/kg	1.00E+00			1.14E+00	NA	1.88E+01	1.88E+01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	1.16E-04	0.00E+00	0.00E+00	1.42E-03	NA	9.34E-02	0.00E+00	6.88E-05	0.00E+00	9.50E-02	8.50E+00	1.12E-02	2.55E+01	3.72E-03	0.01%	0.03%
Selenium	3.74E-03	mg/L	1.29E+00	mg/kg	4.13E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.18E+00	5.20E-01	4.64E-01	4.64E-01	1.95E-01	1.95E-01	3.08E-04	5.34E-04	1.71E-04	1.13E-03	2.58E-02	2.16E-03	0.00E+00	3.40E-03	0.00E+00	1.19E-04	0.00E+00	3.36E-02	2.00E-01	1.68E-01	3.30E-01	1.02E-01	0.14%	0.82%
Silver	0.00E+00	mg/L	2.66E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	1.10E-03	0.00E+00	0.00E+00	5.31E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.42E-02	1.90E+01	2.85E-03	5.70E+01	9.51E-04	0.00%	0.01%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	5.91E-03	0.00E+00	0.00E+00	1.76E-02	0.00E+00	8.87E-02	0.00E+00	3.51E-03	0.00E+00	1.16E-01	2.63E+02	4.40E-04	7.89E+02	1.47E-04	0.00%	0.00%
Sulfate	1.42E+01	mg/L	6.05E+00	mg/kg	2.30E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	1.17E+00	2.51E-03	9.53E-02	2.25E+01	5.64E-02	1.16E+00	0.00E+00	1.43E+00	0.00E+00	5.65E-02	0.00E+00	2.65E+01	NA	NA	NA	NA	NA	NA
Thallium	1.70E-03	mg/L	7.02E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00							1.40E-04	2.91E-04	0.00E+00	4.00E-02	1.40E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E-02	7.40E-03	7.36E+00	7.40E-02	7.36E-01	6.11%	5.93%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.04E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.26E-07	0.00E+00	0.00E+00	2.12E-05	0.00E+00	2.17E-07	0.00E+00	5.17E-07	0.00E+00	2.21E-05	4.58E+00	4.82E-06	9.16E+00	2.41E-06	0.00%	0.00%
Vanadium	0.00E+00	mg/L	0.00E+00	mg/kg	1.53E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	0.00E+00	0.00E+00	6.35E-03	0.00E+00	0.00E+00	5.99E-03	0.00E+00	1.09E-03	0.00E+00	1.34E-04	0.00E+00	1.36E-02	2.10E-01	6.46E-02	2.10E+00	6.46E-03	0.05%	0.05%
Zinc	8.78E-02	mg/L	9.41E+01	mg/kg	5.89E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.53E+00	6.57E-01	8.08E-01	8.08E-01	4.51E-01	4.51E-01	7.23E-03	3.90E-02	2.44E-02	6.49E-01	3.14E+00	1.44E+00	0.00E+00	8.44E-01	0.00E+00	3.93E-02	0.00E+00	6.19E+00	1.60E+02	3.87E-02	3.20E+02	1.93E-02	0.03%	0.16%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	2.0E-05	1.0E-05	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	8.2E-04	1.6E-04	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	9.2E-02	9.1E-03	0.08%	0.07%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	3.1E-03	3.2E-04	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	5.1E-03	5.2E-04	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0.6	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.05	unitless
Aq. Invert diet fraction =	0.15	unitless
Terr. Invert diet fraction =	0.15	unitless
Mammal diet fraction =	0.05	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.002394	kg/d
Sediment ingestion rate =	0.002394	kg/d
Food ingestion rate =	0.171	kg/d
Body weight =	5.78	kg
Home range =	2011	acres
Water intake rate =	0.476	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-58
Tier 2 COPCs
EEQs and Hazard Indices for the Raccoon-Louisiana Black Bear at LHAAP
Low Impact Sub-Area/Goose Praire Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
									---Unitless---							mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	7.00E-09	mg/L	1.27E-06	mg/kg	3.18E-06	mg/kg	#######	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	5.76E-10	5.26E-10	1.32E-09	2.39E-07	2.63E-08	1.56E-07	0.00E+00	2.19E-10	0.00E+00	2.23E-10	0.00E+00	4.24E-07	1.00E-06	4.24E-01	1.00E-05	4.24E-02	0.43%	0.42%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	mg/L	2.56E-03	mg/kg	8.00E-04	mg/kg	#######		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	1.06E-06	3.32E-07	0.00E+00	4.77E-06	3.18E-05	0.00E+00	3.98E-07	0.00E+00	1.04E-06	0.00E+00	3.94E-05	8.00E-01	4.92E-05	4.00E+00	9.85E-06	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	3.10E-03	mg/kg	#######		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	1.28E-06	0.00E+00	0.00E+00	1.24E-04	0.00E+00	7.48E-06	0.00E+00	4.32E-06	0.00E+00	1.37E-04	8.00E-01	1.71E-04	4.00E+00	3.42E-05	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	2.61E-03	mg/kg	1.07E-03	mg/kg	#######		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	1.08E-06	4.42E-07	0.00E+00	1.95E-05	4.40E-05	0.00E+00	5.31E-07	0.00E+00	1.40E-06	0.00E+00	6.69E-05	8.00E-01	8.36E-05	4.00E+00	1.67E-05	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	#######			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	7.29E-08	0.00E+00	0.00E+00	7.24E-06	0.00E+00	1.52E-08	0.00E+00	2.28E-07	0.00E+00	7.55E-06	2.00E-01	3.78E-05	1.00E+00	7.55E-06	0.00%	0.00%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.15E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.31E-07	0.00E+00	0.00E+00	1.27E-05	0.00E+00	5.22E-08	0.00E+00	4.09E-07	0.00E+00	1.33E-05	4.58E+00	2.90E-06	9.16E+00	1.45E-06	0.00%	0.00%
Aluminum	1.73E+00	mg/L	8.98E+03	mg/kg	0.00E+00	mg/kg	#######	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	1.42E-01	3.72E+00	0.00E+00	1.10E-02	1.79E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+02	1.93E+00	9.49E+01	1.93E+01	9.49E+00	96.81%	94.72%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-01	mg/kg	#######			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	2.11E-04	0.00E+00	0.00E+00	6.78E-04	0.00E+00	3.35E-04	0.00E+00	8.34E-05	0.00E+00	1.31E-03	1.25E-01	1.05E-02	1.25E+00	1.05E-03	0.01%	0.01%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.55E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.06E-06	0.00E+00	0.00E+00	1.03E-04	0.00E+00	3.80E-07	0.00E+00	3.31E-06	0.00E+00	1.08E-04	6.85E-02	1.58E-03	6.85E-01	1.58E-04	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.21E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	5.01E-07	0.00E+00	0.00E+00	4.89E-05	0.00E+00	1.80E-07	0.00E+00	1.57E-06	0.00E+00	5.11E-05	6.80E-02	7.52E-04	6.90E-01	7.41E-05	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	4.20E-02	mg/kg	3.32E-03	mg/kg	#######		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	1.74E-05	1.37E-06	0.00E+00	8.70E-04	1.38E-04	0.00E+00	2.11E-07	0.00E+00	2.44E-06	0.00E+00	1.03E-03	6.80E-02	1.51E-02	6.90E-01	1.49E-03	0.02%	0.01%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	4.07E-03	mg/kg	#######			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	1.69E-06	0.00E+00	0.00E+00	1.78E-04	0.00E+00	4.64E-08	0.00E+00	1.01E-05	0.00E+00	1.89E-04	6.80E-02	2.79E-03	6.90E-01	2.75E-04	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	7.92E-04	mg/kg	#######			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.28E-07	0.00E+00	0.00E+00	2.84E-05	0.00E+00	7.40E-06	0.00E+00	1.03E-06	0.00E+00	3.71E-05	6.80E-02	5.46E-04	6.90E-01	5.38E-05	0.00%	0.00%
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	0.00E+00	mg/kg	#######	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	4.89E-02	0.00E+00	0.00E+00	2.36E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.41E+00	5.10E+00	4.72E-01	1.98E+01	1.22E-01	0.48%	1.21%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	5.10E-02	mg/kg	#######			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.11E-05	0.00E+00	0.00E+00	1.73E-03	0.00E+00	2.91E-03	0.00E+00	6.61E-05	0.00E+00	4.73E-03	4.00E+00	1.18E-03	4.00E+01	1.18E-04	0.00%	0.00%
bis(2-ethylhexyl)phthalate	1.43E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	1.18E-03	0.00E+00	0.00E+00	1.51E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.63E-02	1.83E+01	8.88E-04	1.83E+02	8.90E-05	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	mg/L	4.84E-01	mg/kg	3.02E-01	mg/kg	#######	1.15E+03	6.00E-01	2.87E+01	8.58E-01	1.06E+00	1.06E+00	6.72E-01	6.72E-01	0.00E+00	2.00E-04	1.25E-04	0.00E+00	1.29E-03	3.86E-02	0.00E+00	5.69E-03	0.00E+00	3.01E-04	0.00E+00	4.62E-02	1.00E+00	4.62E-02	1.00E+01	4.62E-03	0.05%	0.05%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	7.17E-08	0.00E+00	0.00E+00	6.98E-06	0.00E+00	2.86E-08	0.00E+00	2.24E-07	0.00E+00	7.30E-06	4.58E+00	1.59E-06	9.16E+00	7.97E-07	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E+01	mg/kg	#######	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	0.00E+00	0.00E+00	4.57E-03	0.00E+00	0.00E+00	1.50E-02	0.00E+00	8.02E-03	0.00E+00	1.38E-03	0.00E+00	2.89E-02	3.28E+00	8.82E-03	1.31E+01	2.20E-03	0.01%	0.02%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	8.78E-08	0.00E+00	0.00E+00	8.55E-06	0.00E+00	3.51E-08	0.00E+00	2.75E-07	0.00E+00	8.95E-06	4.58E+00	1.95E-06	9.16E+00	9.77E-07	0.00%	0.00%
Copper	1.23E-02	mg/L	1.08E+01	mg/kg	6.53E+00	mg/kg	#######	1.11E+03	1.56E+00	1.45E+00	4.57E-01	6.22E-01	6.22E-01	8.97E-02	8.97E-02	1.01E-03	4.49E-03	2.70E-03	2.01E-02	7.50E-02	4.21E-02	0.00E+00	7.21E-02	0.00E+00	8.66E-04	0.00E+00	2.18E-01	1.17E+01	1.87E-02	1.51E+01	1.44E-02	0.02%	0.14%
Dieldrin	0.00E+00	mg/L	2.57E-03	mg/kg	1.72E-04	mg/kg	#######		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	1.06E-06	7.12E-08	0.00E+00	6.61E-05	6.72E-06	0.00E+00	7.32E-08	0.00E+00	2.23E-07	0.00E+00	7.43E-05	2.00E-02	3.71E-03	2.00E-01	3.71E-04	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-04	mg/kg	#######			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	9.85E-08	0.00E+00	0.00E+00	9.29E-06	0.00E+00	1.16E-07	0.00E+00	4.27E-07	0.00E+00	9.93E-06	9.20E-02	1.08E-04	9.20E-01	1.08E-05	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.93E-04	mg/kg	#######			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	8.00E-08	0.00E+00	0.00E+00	7.67E-06	0.00E+00	5.44E-08	0.00E+00	2.50E-07	0.00E+00	8.05E-06	8.00E-02	1.01E-04	2.90E-01	2.78E-05	0.00%	0.00%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	2.68E+00	mg/L	0.00E+00	mg/kg	9.10E+03	mg/kg	#######	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	2.21E-01	0.00E+00	3.77E+00	9.92E-01	0.00E+00	1.45E+00	0.00E+00	6.46E-01	0.00E+00	2.37E-02	0.00E+00	7.11E+00	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	6.26E-03	mg/L	5.97E+01	mg/kg	2.21E+01	mg/kg	#######	4.48E+02	7.10E-02	4.50E-01	4.37E-02	6.78E-02	6.78E-02	1.16E-02	1.16E-02	5.15E-04	2.47E-02	9.14E-03	4.15E-03	1.88E-02	4.41E-02	0.00E+00	2.66E-02	0.00E+00	3.80E-04	0.00E+00	1.28E-01	8.00E+00	1.61E-02	8.00E+01	1.61E-03	0.02%	0.02%
Manganese	2.12E-01	mg/L	0.00E+00	mg/kg	8.30E+02	mg/kg	#######	2.50E+02	4.20E-01	2.26E-01	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	1.75E-02	0.00E+00	3.44E-01	7.84E-02	0.00E+00	8.32E-01	0.00E+00	1.16E+00	0.00E+00	9.31E-03	0.00E+00	2.44E+00	8.80E+01	2.78E-02	2.84E+02	8.61E-03	0.03%	0.09%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-02	mg/kg	#######		1.14E+00	7.64E+00	NA	1.41E+00	1.41E+00	9.15E-02	9.15E-02	0.00E+00	0.00E+00	2.24E-05	0.00E+00	0.00E+00	1.83E-03	NA	1.35E-03	0.00E+00	7.31E-06	0.00E+00	3.21E-03	1.00E+00	3.21E-03	3.00E+00	1.07E-03	0.00%	0.01%
Mercury (methyl)	0.00E+00	mg/L	2.09E-01	mg/kg	0.00E+00	mg/kg	#######		1.14E+00	NA	7.56E-01	NA	NA			0.00E+00	8.65E-05	0.00E+00	0.00E+00	1.05E-03	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	1.14E-03	1.50E-02	7.59E-02	2.50E-02	4.56E-02	0.08%	0.45%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.88E-04	mg/kg	#######			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.19E-07	0.00E+00	0.00E+00	1.20E-05	0.00E+00	1.76E-08	0.00E+00	3.74E-07	0.00E+00	1.25E-05	7.00E-02	1.78E-04	7.00E-01	1.78E-05	0.00%	0.00%
Nickel	0.00E+00	mg/L	0.00E+00	mg/kg	6.36E+00	mg/kg	#######		4.86E-01	1.06E+00	NA	6.84E-02	6.84E-02	8.71E-02	8.71E-02	0.00E+00	0.00E+00	2.63E-03	0.00E+00	0.00E+00	2.99E-02	NA	7.72E-03	0.00E+00	8.19E-04	0.00E+00	4.11E-02	4.00E+01	1.03E-03	8.00E+01	5.13E-04	0.00%	0.01%
Nitrate	4.70E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	3.87E-02	0.00E+00	0.00E+00	2.09E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.48E-01	5.07E+02	4.89E-04	1.13E+03	2.19E-04	0.00%	0.00%
Nitrate/Nitrite	6.18E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	3.01E+02								5.09E-03	0.00E+00	0.00E+00	2.75E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.26E-02	5.07E+02	6.43E-05	1.13E+03	2.89E-05	0.00%	0.00%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E-04	mg/kg	#######			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	7.07E-08	0.00E+00	0.00E+00	6.67E-06	0.00E+00	7.98E-08	0.00E+00	2.21E-07	0.00E+00	7.04E-06	4.58E+00	1.54E-06	9.16E+00	7.69E-07	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.62E-04	mg/kg	#######			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.33E-07	0.00E+00	0.00E+00	2.18E-05	0.00E+00	2.73E-07	0.00E+00	7.28E-07	0.00E+00	2.31E-05	2.40E-01	9.61E-05	2.40E+00	9.61E-06	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-01	mg/kg	#######			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.03E-04	0.00E+00	0.00E+00	9.41E-03	0.00E+00	1.87E-04	0.00E+00	3.21E-04	0.00E+00	1.00E-02	2.40E-01	4.17E-02	2.40E+00	4.17E-03	0.04%	0.04%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	7.70E-02	mg/kg	#######			3.00E-01	NA	3.19E+01	3.19E+01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	3.19E-05	0.00E+00	0.00E+00	1.03E-04	NA	4.36E-02	0.00E+00	1.26E-05	0.00E+00	4.38E-02	8.50E+00	5.15E-03	2.55E+01	1.72E-03	0.01%	0.02%
Selenium	3.23E-03	mg/L	1.10E+00	mg/kg	3.74E-01	mg/kg	#######	2.05E+02	4.50E+00	1.21E+00	5.12E-01	4.59E-01	4.59E-01	1.51E-01	1.51E-01	2.66E-04	4.56E-04	1.55E-04	9.78E-04	2.20E-02	2.01E-03	0.00E+00	3.04E-03	0.00E+00	8.34E-05	0.00E+00	2.90E-02	2.00E-01	1.45E-01	3.30E-01	8.79E-02	0.15%	0.88%
Silver	0.00E+00	mg/L	2.05E+00	mg/kg	0.00E+00	mg/kg	#######		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	8.48E-04	0.00E+00	0.00E+00	4.09E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.18E-02	1.90E+01	2.20E-03	5.70E+01	7.33E-04	0.00%	0.01%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.30E+01	mg/kg	#######		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	5.38E-03	0.00E+00	0.00E+00	5.01E-03	0.00E+00	4.84E-02	0.00E+00	2.13E-03	0.00E+00	6.09E-02	2.63E+02	2.32E-04	7.89E+02	7.72E-05	0.00%	0.00%
Sulfate	1.10E+01	mg/L	4.59E+00	mg/kg	1.30E+02	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	9.07E-01	1.90E-03	5.38E-02	4.90E+00	8.55E-03	1.73E-01	0.00E+00	4.85E-01	0.00E+00	2.13E-02	0.00E+00	6.55E+00	NA	NA	NA	NA	NA	NA
Thallium	1.00E-03	mg/L	6.22E-01	mg/kg	0.00E+00	mg/kg	#######	7.50E+01	4.50E+00							8.25E-05	2.58E-04	0.00E+00	1.11E-04	1.24E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.29E-02	7.40E-03	1.74E+00	7.40E-02	1.74E-01	1.77%	1.74%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.05E-07	0.00E+00	0.00E+00	1.02E-05	0.00E+00	4.18E-08	0.00E+00	3.28E-07	0.00E+00	1.07E-05	4.58E+00	2.33E-06	9.16E+00	1.16E-06	0.00%	0.00%
Vanadium	0.00E+00	mg/L	0.00E+00	mg/kg	1.45E+01	mg/kg	#######	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	0.00E+00	0.00E+00	5.99E-03	0.00E+00	0.00E+00	2.70E-03	0.00E+00	9.25E-04	0.00E+00	1.17E-04	0.00E+00	9.73E-03	2.10E-01	4.63E-02	2.10E+00	4.63E-03	0.05%	0.05%
Zinc	6.50E-02	mg/L	7.78E+01	mg/kg	4.79E+01	mg/kg	#######	2.91E+03	1.94E+00	6.34E+00	7.15E-01	8.84E-01	8.84E-01	1.84E-01	1.84E-01	5.35E-03	3.22E-02	1.99E-02	2.80E-01	6.69E-01	1.35E+00	0.00E+00	7.53E-01	0.00E+00	1.31E-02	0.00E+00	3.12E+00	1.60E+02	1.95E-02	3.20E+02	9.75E-03	0.02%	0.10%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.0E-05	5.2E-06	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	3.0E-04	6.1E-05	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	2.1E-02	2.1E-03	0.02%	0.02%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	8.9E-04	8.9E-05	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	3.9E-03	3.9E-04	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0.6	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.05	unitless
Aq. Invert diet fraction =	0.15	unitless
Terr. Invert diet fraction =	0.15	unitless
Mammal diet fraction =	0.05	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.002394	kg/d
Sediment ingestion rate =	0.002394	kg/d
Food ingestion rate =	0.171	kg/d
Body weight =	5.78	kg
Home range =	2011	acres
Water intake rate =	0.476	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-59
Tier 1 COPCs
EEQs and Hazard Indices for the Short-tailed Shrew at LHAAP
Low Impact Sub-Area/Goose Praire Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Total Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							-------	-------	-------	-------	Unitless	-------	-------	-------		mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	8.59E-09	mg/L	1.56E-06	mg/kg	3.95E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	1.89E-09	0.00E+00	5.52E-08	0.00E+00	0.00E+00	9.43E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.49E-06	1.00E-06	9.49E+00	1.00E-05	9.49E-01	47.96%	36.59%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	mg/L	2.97E-03	mg/kg	1.42E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.98E-05	0.00E+00	0.00E+00	2.36E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.38E-03	8.00E-01	2.98E-03	4.00E+00	5.96E-04	0.02%	0.02%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	4.15E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	5.79E-05	0.00E+00	0.00E+00	6.95E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.01E-03	8.00E-01	8.76E-03	4.00E+00	1.75E-03	0.04%	0.07%
4,4'-DDT	0.00E+00	mg/L	3.04E-03	mg/kg	1.82E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	0.00E+00	2.55E-05	0.00E+00	0.00E+00	3.15E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.18E-03	8.00E-01	3.97E-03	4.00E+00	7.94E-04	0.02%	0.03%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.04E-04	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.84E-06	0.00E+00	0.00E+00	3.51E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-04	2.00E-01	1.77E-03	1.00E+00	3.54E-04	0.01%	0.01%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.68E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	5.14E-06	0.00E+00	0.00E+00	6.23E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.28E-04	4.58E+00	1.37E-04	9.16E+00	6.86E-05	0.00%	0.00%
Aluminum	2.10E+00	mg/L	1.03E+04	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	4.61E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.61E-01	1.93E+00	2.39E-01	1.93E+01	2.39E-02	1.21%	0.92%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.68E-01	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	7.93E-03	0.00E+00	0.00E+00	6.95E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.75E-02	1.25E-01	6.20E-01	1.25E+00	6.20E-02	3.13%	2.39%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.04E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.24E-05	0.00E+00	0.00E+00	5.16E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.20E-03	6.85E-02	7.59E-02	6.85E-01	7.59E-03	0.38%	0.29%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.37E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.92E-05	0.00E+00	0.00E+00	2.33E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.35E-03	6.80E-02	3.45E-02	6.80E-01	3.45E-03	0.17%	0.13%
Aroclor 1254	0.00E+00	mg/L	5.10E-02	mg/kg	4.04E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	0.00E+00	5.64E-05	0.00E+00	0.00E+00	7.04E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.09E-03	6.80E-02	1.04E-01	6.80E-01	1.04E-02	0.53%	0.40%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	6.22E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	8.69E-05	0.00E+00	0.00E+00	1.14E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E-02	6.80E-02	1.69E-01	6.80E-01	1.69E-02	0.85%	0.65%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.97E-04	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.25E-05	0.00E+00	0.00E+00	1.35E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E-03	6.80E-02	2.00E-02	6.80E-01	2.00E-03	0.10%	0.08%
Barium	0.00E+00	mg/L	1.34E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E+00	0.00E+00	1.98E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	2.50E-02	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.49E-04	0.00E+00	0.00E+00	3.57E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.60E-02	4.00E+00	9.00E-03	4.00E+01	9.00E-04	0.05%	0.03%
bis(2-ethylhexyl)phthalate	2.43E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	5.34E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.34E-03	1.83E+01	2.91E-04	1.83E+02	2.92E-05	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	mg/L	5.24E-01	mg/kg	3.95E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.55E+01	8.28E-01	9.40E-01	9.40E-01	9.22E-01	9.22E-01	0.00E+00	0.00E+00	5.52E-03	0.00E+00	0.00E+00	1.08E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E+00	1.00E+00	1.09E+00	1.00E+01	1.09E-01	5.49%	4.19%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.93E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.70E-06	0.00E+00	0.00E+00	3.27E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.30E-04	4.58E+00	7.20E-05	9.16E+00	3.60E-05	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.16E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	0.00E+00	0.00E+00	1.62E-01	0.00E+00	0.00E+00	3.95E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.11E+00	3.28E+00	1.25E+00	1.31E+01	3.13E-01	6.33%	12.06%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.52E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.52E-06	0.00E+00	0.00E+00	4.27E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.30E-04	4.58E+00	9.40E-05	9.16E+00	4.70E-05	0.00%	0.00%
Copper	1.42E-02	mg/L	1.27E+01	mg/kg	7.35E+00	mg/kg	1.00E+00	5.92E+03	5.25E+00	1.33E+00	4.15E-01	5.79E-01	5.79E-01	1.49E-01	1.49E-01	3.12E-03	0.00E+00	1.03E-01	0.00E+00	0.00E+00	1.05E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E+00	1.17E+01	9.87E-02	1.51E+01	7.63E-02	0.50%	2.94%
Dieldrin	0.00E+00	mg/L	3.00E-03	mg/kg	1.88E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.63E-06	0.00E+00	0.00E+00	3.09E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.12E-04	2.00E-02	1.56E-02	2.00E-01	1.56E-03	0.08%	0.06%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.77E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	3.87E-06	0.00E+00	0.00E+00	4.54E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E-04	9.20E-02	4.98E-03	9.20E-01	4.98E-04	0.03%	0.02%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.36E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.30E-06	0.00E+00	0.00E+00	3.93E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.97E-04	8.00E-02	4.96E-03	2.90E-01	1.37E-03	0.03%	0.05%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	3.14E+00	mg/L	0.00E+00	mg/kg	1.01E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	6.91E-01	0.00E+00	1.40E+02	0.00E+00	0.00E+00	8.43E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.25E+02	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	7.76E-03	mg/L	7.66E+01	mg/kg	2.30E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	4.47E-01	3.92E-02	6.65E-02	6.65E-02	1.33E-02	1.33E-02	1.71E-03	0.00E+00	3.22E-01	0.00E+00	0.00E+00	1.11E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.43E+00	8.00E+00	1.79E-01	8.00E+01	1.79E-02	0.90%	0.69%
Manganese	2.73E-01	mg/L	0.00E+00	mg/kg	9.62E+02	mg/kg	1.00E+00	2.00E+03	2.10E+00	2.20E-01	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	6.01E-02	0.00E+00	1.34E+01	0.00E+00	0.00E+00	2.27E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.62E+01	8.80E+01	4.11E-01	2.84E+02	1.28E-01	2.08%	4.91%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.69E-02	mg/kg	1.00E+00		2.87E+00	7.38E+00	NA	1.38E+00	1.38E+00	1.03E-01	1.03E-01	0.00E+00	0.00E+00	7.94E-04	0.00E+00	0.00E+00	4.51E-02	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.59E-02	1.32E+01	3.48E-03	3.96E+01	1.16E-03	0.02%	0.04%
Mercury (methyl)	0.00E+00	mg/L	2.65E-01	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	6.78E-01	NA	NA			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	3.20E-02	0.00E+00	1.60E-01	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.43E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.79E-06	0.00E+00	0.00E+00	5.98E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.03E-04	7.00E-02	8.61E-03	7.00E-01	8.61E-04	0.04%	0.03%
Nickel	0.00E+00	mg/L	0.00E+00	mg/kg	6.83E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	NA	6.72E-02	6.72E-02	1.01E-01	1.01E-01	0.00E+00	0.00E+00	9.54E-02	0.00E+00	0.00E+00	3.47E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.57E+00	4.00E+01	8.92E-02	8.00E+01	4.46E-02	0.45%	1.72%
Nitrate	8.86E-01	mg/L	0.00E+00	mg/kg	1.86E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	1.95E-01	0.00E+00	2.60E-02	0.00E+00	0.00E+00	2.28E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.49E-01	5.07E+02	8.86E-04	1.13E+03	3.97E-04	0.00%	0.02%
Nitrate/Nitrite	8.12E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03								1.79E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.79E-02	5.07E+02	3.52E-05	1.13E+03	1.58E-05	0.00%	0.00%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.84E-04	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.56E-06	0.00E+00	0.00E+00	3.01E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.04E-04	4.58E+00	6.64E-05	9.16E+00	3.32E-05	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	9.03E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.26E-05	0.00E+00	0.00E+00	1.47E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.48E-03	2.40E-01	6.19E-03	2.40E+00	6.19E-04	0.03%	0.02%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	5.32E-01	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	7.43E-03	0.00E+00	0.00E+00	8.49E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.56E-01	2.40E-01	3.57E+00	2.40E+00	3.57E-01	18.03%	13.75%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	9.01E-02	mg/kg	1.00E+00			1.14E+00	NA	2.99E+01	2.99E+01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	1.26E-03	0.00E+00	0.00E+00	1.10E-02	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.23E-02	8.50E+00	1.45E-03	2.55E+01	4.82E-04	0.01%	0.02%
Selenium	3.74E-03	mg/L	1.29E+00	mg/kg	3.97E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.19E+00	5.20E-01	4.62E-01	4.62E-01	1.95E-01	1.95E-01	8.22E-04	0.00E+00	5.55E-03	0.00E+00	0.00E+00	5.08E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.71E-02	2.00E-01	2.86E-01	3.30E-01	1.73E-01	1.44%	6.68%
Silver	0.00E+00	mg/L	2.66E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	1.99E-01	0.00E+00	0.00E+00	4.26E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.25E-01	2.63E+02	2.38E-03	7.89E+02	7.92E-04	0.01%	0.03%
Sulfate	1.42E+01	mg/L	6.05E+00	mg/kg	2.06E+03	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	3.13E+00	0.00E+00	2.88E+01	0.00E+00	0.00E+00	2.52E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.84E+02	NA	NA	NA	NA	NA	NA
Thallium	1.70E-03	mg/L	7.02E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00							3.74E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.74E-04	7.40E-03	5.05E-02	7.40E-02	5.05E-03	0.26%	0.19%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.16E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.41E-06	0.00E+00	0.00E+00	5.35E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.39E-04	4.58E+00	1.18E-04	9.16E+00	5.89E-05	0.00%	0.00%
Vanadium	0.00E+00	mg/L	0.00E+00	mg/kg	1.54E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	0.00E+00	0.00E+00	2.15E-01	0.00E+00	0.00E+00	1.45E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.60E-01	2.10E-01	1.71E+00	2.10E+00	1.71E-01	8.66%	6.61%
Zinc	8.78E-02	mg/L	9.41E+01	mg/kg	5.97E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.48E+00	6.57E-01	8.03E-01	8.03E-01	4.51E-01	4.51E-01	1.93E-02	0.00E+00	8.33E-01	0.00E+00	0.00E+00	3.51E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.60E+01	1.60E+02	2.25E-01	3.20E+02	1.12E-01	1.14%	4.33%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	4.9E-04	2.4E-04	0.00%	0.01%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	1.6E-02	3.1E-03	0.08%	0.12%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	4.0E-01	4.0E-02	2.04%	1.56%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	2.9E-04	2.9E-05	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	2.2E-02	2.4E-03	0.11%	0.09%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\,x\,Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	1	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.000209	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.001611	kg/d
Body weight =	0.015	kg
Home range =	0.074131	acres
Water intake rate =	0.0033	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-60
Tier 2 COPCs
EEQs and Hazard Indices for the Short-tailed Shrew at LHAAP
Low Impact Sub-Area/Goose Praire Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Total Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
									----Unitless----							mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	7.00E-09	mg/L	1.27E-06	mg/kg	3.18E-06	mg/kg	#######	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	1.54E-09	0.00E+00	4.44E-08	0.00E+00	0.00E+00	3.76E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.81E-06	1.00E-06	3.81E+00	1.00E-05	3.81E-01	40.41%	28.51%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	mg/L	2.56E-03	mg/kg	8.25E-04	mg/kg	#######		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.15E-05	0.00E+00	0.00E+00	7.93E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.05E-04	8.00E-01	1.01E-03	4.00E+00	2.01E-04	0.01%	0.02%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	3.08E-03	mg/kg	#######		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	4.31E-05	0.00E+00	0.00E+00	2.98E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.02E-03	8.00E-01	3.78E-03	4.00E+00	7.56E-04	0.04%	0.06%
4,4'-DDT	0.00E+00	mg/L	2.61E-03	mg/kg	1.10E-03	mg/kg	#######		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	1.54E-05	0.00E+00	0.00E+00	1.10E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E-03	8.00E-01	1.39E-03	4.00E+00	2.78E-04	0.01%	0.02%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.81E-04	mg/kg	#######			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.53E-06	0.00E+00	0.00E+00	1.80E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E-04	2.00E-01	9.13E-04	1.00E+00	1.83E-04	0.01%	0.01%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.11E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.35E-06	0.00E+00	0.00E+00	3.04E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.08E-04	4.58E+00	6.73E-05	9.16E+00	3.36E-05	0.00%	0.00%
Aluminum	1.73E+00	mg/L	8.98E+03	mg/kg	0.00E+00	mg/kg	#######	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	3.81E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.81E-01	1.93E+00	1.97E-01	1.93E+01	1.97E-02	2.09%	1.48%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.12E-01	mg/kg	#######			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	7.15E-03	0.00E+00	0.00E+00	1.65E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.36E-02	1.25E-01	1.89E-01	1.25E+00	1.89E-02	2.01%	1.42%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.54E-05	0.00E+00	0.00E+00	2.48E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.51E-03	6.85E-02	3.67E-02	6.85E-01	3.67E-03	0.39%	0.27%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.17E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.63E-05	0.00E+00	0.00E+00	1.15E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.16E-03	6.80E-02	1.71E-02	6.80E-01	1.71E-03	0.18%	0.13%
Aroclor 1254	0.00E+00	mg/L	4.20E-02	mg/kg	3.27E-03	mg/kg	#######		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	4.57E-05	0.00E+00	0.00E+00	3.29E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.33E-03	6.80E-02	4.90E-02	6.80E-01	4.90E-03	0.52%	0.37%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	4.04E-03	mg/kg	#######			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	5.64E-05	0.00E+00	0.00E+00	4.26E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.32E-03	6.80E-02	6.35E-02	6.80E-01	6.35E-03	0.67%	0.48%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.43E-04	mg/kg	#######			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.18E-05	0.00E+00	0.00E+00	7.31E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.43E-04	6.80E-02	1.09E-02	6.80E-01	1.09E-03	0.12%	0.08%
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	0.00E+00	mg/kg	#######	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E+00	0.00E+00	1.98E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	2.19E-02	mg/kg	#######			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.06E-04	0.00E+00	0.00E+00	1.80E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E-02	4.00E+00	4.58E-03	4.00E+01	4.58E-04	0.05%	0.03%
bis(2-ethylhexyl)phthalate	1.43E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	3.14E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.14E-03	1.83E+01	1.71E-04	1.83E+02	1.72E-05	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	mg/L	4.84E-01	mg/kg	3.19E-01	mg/kg	#######	1.15E+03	6.00E-01	2.80E+01	8.58E-01	1.03E+00	1.03E+00	6.72E-01	6.72E-01	0.00E+00	0.00E+00	4.46E-03	0.00E+00	0.00E+00	9.62E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.66E-01	1.00E+00	9.66E-01	1.00E+01	9.66E-02	10.25%	7.23%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.16E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.01E-06	0.00E+00	0.00E+00	2.10E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.13E-04	4.58E+00	4.66E-05	9.16E+00	2.33E-05	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.09E+01	mg/kg	#######	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	0.00E+00	0.00E+00	1.52E-01	0.00E+00	0.00E+00	3.57E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.09E-01	3.28E+00	1.55E-01	1.31E+01	3.87E-02	1.65%	2.90%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.19E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.06E-06	0.00E+00	0.00E+00	2.14E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.17E-04	4.58E+00	4.74E-05	9.16E+00	2.37E-05	0.00%	0.00%
Copper	1.23E-02	mg/L	1.08E+01	mg/kg	6.48E+00	mg/kg	#######	1.11E+03	1.56E+00	1.46E+00	4.57E-01	6.25E-01	6.25E-01	8.97E-02	8.97E-02	2.70E-03	0.00E+00	9.05E-02	0.00E+00	0.00E+00	1.02E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E+00	1.17E+01	9.49E-02	1.51E+01	7.34E-02	1.01%	5.49%
Dieldrin	0.00E+00	mg/L	2.57E-03	mg/kg	1.76E-04	mg/kg	#######		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.46E-06	0.00E+00	0.00E+00	1.67E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.69E-04	2.00E-02	8.45E-03	2.00E-01	8.45E-04	0.09%	0.06%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.64E-04	mg/kg	#######			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	3.69E-06	0.00E+00	0.00E+00	2.50E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.54E-04	9.20E-02	2.76E-03	9.20E-01	2.76E-04	0.03%	0.02%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.04E-04	mg/kg	#######			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.85E-06	0.00E+00	0.00E+00	1.96E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.99E-04	8.00E-02	2.49E-03	2.90E-01	6.86E-04	0.03%	0.05%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	2.68E+00	mg/L	0.00E+00	mg/kg	9.10E+03	mg/kg	#######	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	5.90E-01	0.00E+00	1.27E+02	0.00E+00	0.00E+00	3.52E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.63E+02	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	6.26E-03	mg/L	5.97E+01	mg/kg	2.03E+01	mg/kg	#######	4.48E+02	7.10E-02	4.57E-01	4.37E-02	7.03E-02	7.03E-02	1.16E-02	1.16E-02	1.38E-03	0.00E+00	2.84E-01	0.00E+00	0.00E+00	9.98E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E+00	8.00E+00	1.60E-01	8.00E+01	1.60E-02	1.70%	1.20%
Manganese	2.12E-01	mg/L	0.00E+00	mg/kg	8.30E+02	mg/kg	#######	2.50E+02	4.20E-01	2.26E-01	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	4.66E-02	0.00E+00	1.16E+01	0.00E+00	0.00E+00	2.01E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.18E+01	8.80E+01	3.61E-01	2.84E+02	1.12E-01	3.83%	8.37%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.07E-02	mg/kg	#######		1.14E+00	7.97E+00	NA	1.45E+00	1.45E+00	9.15E-02	9.15E-02	0.00E+00	0.00E+00	7.08E-04	0.00E+00	0.00E+00	4.34E-02	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.41E-02	1.32E+01	3.34E-03	3.96E+01	1.11E-03	0.04%	0.08%
Mercury (methyl)	0.00E+00	mg/L	2.09E-01	mg/kg	0.00E+00	mg/kg	#######		1.14E+00	NA	7.56E-01	NA	NA			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	3.20E-02	0.00E+00	1.60E-01	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.87E-04	mg/kg	#######			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.01E-06	0.00E+00	0.00E+00	2.88E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.92E-04	7.00E-02	4.18E-03	7.00E-01	4.18E-04	0.04%	0.03%
Nickel	0.00E+00	mg/L	0.00E+00	mg/kg	6.19E+00	mg/kg	#######		4.86E-01	1.06E+00	NA	6.89E-02	6.89E-02	8.71E-02	8.71E-02	0.00E+00	0.00E+00	8.64E-02	0.00E+00	0.00E+00	7.04E-01	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.90E-01	4.00E+01	1.98E-02	8.00E+01	9.88E-03	0.21%	0.74%
Nitrate	4.70E-01	mg/L	0.00E+00	mg/kg	1.13E+00	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	1.03E-01	0.00E+00	1.57E-02	0.00E+00	0.00E+00	3.63E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.56E-01	5.07E+02	3.07E-04	1.13E+03	1.38E-04	0.00%	0.01%
Nitrate/Nitrite	6.18E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	3.01E+02								1.36E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E-02	5.07E+02	2.68E-05	1.13E+03	1.20E-05	0.00%	0.00%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E-04	mg/kg	#######			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.38E-06	0.00E+00	0.00E+00	1.62E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.64E-04	4.58E+00	3.58E-05	9.16E+00	1.79E-05	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.57E-04	mg/kg	#######			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	7.78E-06	0.00E+00	0.00E+00	5.24E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.31E-04	2.40E-01	2.21E-03	2.40E+00	2.21E-04	0.02%	0.02%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	3.80E-01	mg/kg	#######			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	5.30E-03	0.00E+00	0.00E+00	3.49E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.55E-01	2.40E-01	1.48E+00	2.40E+00	1.48E-01	15.67%	11.05%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	4.97E-02	mg/kg	#######			3.00E-01	NA	3.82E+01	3.82E+01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	6.94E-04	0.00E+00	0.00E+00	1.60E-03	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.29E-03	8.50E+00	2.70E-04	2.55E+01	9.00E-05	0.00%	0.01%
Selenium	3.23E-03	mg/L	1.10E+00	mg/kg	3.70E-01	mg/kg	#######	2.05E+02	4.50E+00	1.21E+00	5.12E-01	4.59E-01	4.59E-01	1.51E-01	1.51E-01	7.10E-04	0.00E+00	5.17E-03	0.00E+00	0.00E+00	4.83E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.41E-02	2.00E-01	2.71E-01	3.30E-01	1.64E-01	2.87%	12.28%
Silver	0.00E+00	mg/L	2.05E+00	mg/kg	0.00E+00	mg/kg	#######		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.30E+01	mg/kg	#######		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	1.81E-01	0.00E+00	0.00E+00	1.21E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.03E-01	2.63E+02	1.15E-03	7.89E+02	3.84E-04	0.01%	0.03%
Sulfate	1.10E+01	mg/L	4.59E+00	mg/kg	1.38E+03	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	2.42E+00	0.00E+00	1.92E+01	0.00E+00	0.00E+00	4.44E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.60E+01	NA	NA	NA	NA	NA	NA
Thallium	1.00E-03	mg/L	6.22E-01	mg/kg	0.00E+00	mg/kg	#######	7.50E+01	4.50E+00							2.20E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.20E-04	7.40E-03	2.98E-02	7.40E-02	2.98E-03	0.32%	0.22%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.64E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.68E-06	0.00E+00	0.00E+00	2.57E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.61E-04	4.58E+00	5.70E-05	9.16E+00	2.85E-05	0.00%	0.00%
Vanadium	0.00E+00	mg/L	0.00E+00	mg/kg	1.45E+01	mg/kg	#######	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	0.00E+00	0.00E+00	2.02E-01	0.00E+00	0.00E+00	6.53E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.67E-01	2.10E-01	1.27E+00	2.10E+00	1.27E-01	13.50%	9.53%
Zinc	6.50E-02	mg/L	7.78E+01	mg/kg	4.80E+01	mg/kg	#######	2.91E+03	1.94E+00	6.34E+00	7.15E-01	8.84E-01	8.84E-01	1.84E-01	1.84E-01	1.43E-02	0.00E+00	6.69E-01	0.00E+00	0.00E+00	3.27E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.33E+01	1.60E+02	2.08E-01	3.20E+02	1.04E-01	2.21%	7.80%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	2.5E-04	1.3E-04	0.00%	0.01%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	6.2E-03	1.2E-03	0.07%	0.09%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.8E-01	1.8E-02	1.88%	1.33%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	1.7E-04	1.7E-05	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	1.2E-02	1.3E-03	0.13%	0.10%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	1	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.000209	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.001611	kg/d
Body weight =	0.015	kg
Home range =	0.963707	acres
Water intake rate =	0.0033	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-61
Tier 1 COPCs
EEQs and Hazard Indices for the Red Fox at LHAAP
Low Impact Sub-Area/Goose Praire Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Total Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
							-----Unitless-----								
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00
2,3,7,8-TCDD TEQ	8.59E-09	mg/L	1.56E-06	mg/kg	3.95E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00
4,4'-DDD	0.00E+00	mg/L	2.97E-03	mg/kg	1.42E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	4.15E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01
4,4'-DDT	0.00E+00	mg/L	3.04E-03	mg/kg	1.82E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.04E-04	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.68E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Aluminum	2.10E+00	mg/L	1.03E+04	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.68E-01	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.04E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.37E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00
Aroclor 1254	0.00E+00	mg/L	5.10E-02	mg/kg	4.04E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	6.22E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.97E-04	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00
Barium	0.00E+00	mg/L	1.34E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	2.50E-02	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00
bis(2-ethylhexyl)phthalate	2.43E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00
Cadmium	0.00E+00	mg/L	5.24E-01	mg/kg	3.95E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.55E+01	8.28E-01	9.40E-01	9.40E-01	9.22E-01	9.22E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.93E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.16E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.52E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Copper	1.42E-02	mg/L	1.27E+01	mg/kg	7.35E+00	mg/kg	1.00E+00	5.92E+03	5.25E+00	1.33E+00	4.15E-01	5.79E-01	5.79E-01	1.49E-01	1.49E-01
Dieldrin	0.00E+00	mg/L	3.00E-03	mg/kg	1.88E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.77E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.36E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00
Iron	3.14E+00	mg/L	0.00E+00	mg/kg	1.01E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01		
Lead	7.76E-03	mg/L	7.66E+01	mg/kg	2.30E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	4.47E-01	3.92E-02	6.65E-02	6.65E-02	1.33E-02	1.33E-02
Manganese	2.73E-01	mg/L	0.00E+00	mg/kg	9.62E+02	mg/kg	1.00E+00	2.00E+03	2.10E+00	2.20E-01	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.69E-02	mg/kg	1.00E+00		2.87E+00	7.38E+00	NA	1.38E+00	1.38E+00	1.03E-01	1.03E-01
Mercury (methyl)	0.00E+00	mg/L	2.65E-01	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	6.78E-01	NA	NA		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.43E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00
Nickel	0.00E+00	mg/L	0.00E+00	mg/kg	6.83E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	NA	6.72E-02	6.72E-02	1.01E-01	1.01E-01
Nitrate	8.86E-01	mg/L	0.00E+00	mg/kg	1.86E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Nitrate/Nitrite	8.12E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.84E-04	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	9.03E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	5.32E-01	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	9.01E-02	mg/kg	1.00E+00			1.14E+00	NA	2.99E+01	2.99E+01	1.66E-01	1.66E-01
Selenium	3.74E-03	mg/L	1.29E+00	mg/kg	3.97E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.19E+00	5.20E-01	4.62E-01	4.62E-01	1.95E-01	1.95E-01
Silver	0.00E+00	mg/L	2.66E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Sulfate	1.42E+01	mg/L	6.05E+00	mg/kg	2.06E+03	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Thallium	1.70E-03	mg/L	7.02E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.16E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Vanadium	0.00E+00	mg/L	0.00E+00	mg/kg	1.54E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03
Zinc	8.78E-02	mg/L	9.41E+01	mg/kg	5.97E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.48E+00	6.57E-01	8.03E-01	8.03E-01	4.51E-01	4.51E-01

Chemical	EED Surface Water (mg/kg-d)	EED Sediment (mg/kg-d)	EED Soil (mg/kg-d)	EED Fish (mg/kg-d)	EED Aq. Invert. (mg/kg-d)	EED Terr. Invert. (mg/kg-d)	EED Aq. Plants (mg/kg-d)	EED Terr. Plants (mg/kg-d)	EED Plant Roots (mg/kg-d)	EED Mammals (mg/kg-d)	EED Birds (mg/kg-d)	Total EED (mg/kg-d)	NOAEL (mg/kg-d)	EEQ N	LOAEL (mg/kg-d)	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	7.25E-10	0.00E+00	3.74E-09	0.00E+00	0.00E+00	8.90E-08	0.00E+00	7.28E-11	0.00E+00	5.69E-09	1.22E-09	1.00E-07	1.00E-06	1.00E-01	1.00E-05	1.00E-02	16.67%	10.92%
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	0.00E+00	1.34E-06	0.00E+00	0.00E+00	2.23E-05	0.00E+00	4.60E-07	0.00E+00	3.86E-05	8.28E-06	7.10E-05	8.00E-01	8.87E-05	4.00E+00	1.77E-05	0.01%	0.02%
4,4'-DDE	0.00E+00	0.00E+00	3.93E-06	0.00E+00	0.00E+00	6.55E-05	0.00E+00	1.04E-05	0.00E+00	9.74E-05	2.09E-05	1.98E-04	8.00E-01	2.48E-04	4.00E+00	4.96E-05	0.04%	0.05%
4,4'-DDT	0.00E+00	0.00E+00	1.73E-06	0.00E+00	0.00E+00	2.97E-05	0.00E+00	5.91E-07	0.00E+00	7.17E-05	1.54E-05	1.19E-04	8.00E-01	1.49E-04	4.00E+00	2.98E-05	0.02%	0.03%
Aldrin	0.00E+00	0.00E+00	1.93E-07	0.00E+00	0.00E+00	3.32E-06	0.00E+00	5.59E-09	0.00E+00	5.55E-06	1.19E-06	1.03E-05	2.00E-01	5.13E-05	1.00E+00	1.03E-05	0.01%	0.01%
alpha-Chlordane	0.00E+00	0.00E+00	3.49E-07	0.00E+00	0.00E+00	5.88E-06	0.00E+00	6.02E-08	0.00E+00	1.00E-05	2.15E-06	1.85E-05	4.58E+00	4.03E-06	9.16E+00	2.02E-06	0.00%	0.00%
Aluminum	1.77E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.77E-01	1.93E+00	9.18E-02	1.93E+01	9.18E-03	15.22%	9.97%
Antimony	0.00E+00	0.00E+00	5.38E-04	0.00E+00	0.00E+00	6.56E-04	0.00E+00	1.61E-04	0.00E+00	2.23E-03	4.78E-04	4.07E-03	1.25E-01	3.25E-02	1.25E+00	3.25E-03	5.40%	3.54%
Aroclor 1242	0.00E+00	0.00E+00	2.88E-06	0.00E+00	0.00E+00	4.87E-05	0.00E+00	2.01E-06	0.00E+00	8.28E-05	1.77E-05	1.54E-04	6.85E-02	2.25E-03	6.85E-01	2.25E-04	0.37%	0.24%
Aroclor 1248	0.00E+00	0.00E+00	1.30E-06	0.00E+00	0.00E+00	2.20E-05	0.00E+00	5.62E-08	0.00E+00	3.74E-05	8.01E-06	6.87E-05	6.80E-02	1.01E-03	6.90E-01	9.96E-05	0.17%	0.11%
Aroclor 1254	0.00E+00	0.00E+00	3.83E-06	0.00E+00	0.00E+00	6.64E-05	0.00E+00	1.45E-07	0.00E+00	1.01E-04	2.17E-05	1.94E-04	6.80E-02	2.85E-03	6.90E-01	2.80E-04	0.47%	0.30%
Aroclor 1260	0.00E+00	0.00E+00	5.90E-06	0.00E+00	0.00E+00	1.08E-04	0.00E+00	1.15E-07	0.00E+00	2.82E-04	6.05E-05	4.56E-04	6.80E-02	6.71E-03	6.90E-01	6.61E-04	1.11%	0.72%
Aroclor 1268	0.00E+00	0.00E+00	8.50E-07	0.00E+00	0.00E+00	1.27E-05	0.00E+00	1.91E-06	0.00E+00	2.44E-05	5.24E-06	4.52E-05	6.80E-02	6.64E-04	6.90E-01	6.55E-05	0.11%	0.07%
Barium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E+00	0.00E+00	1.98E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	0.00E+00	2.37E-05	0.00E+00	0.00E+00	3.36E-04	0.00E+00	3.26E-04	0.00E+00	6.82E-04	1.46E-04	1.51E-03	4.00E+00	3.78E-04	4.00E+01	3.78E-05	0.06%	0.04%
bis(2-ethylhexyl)phthalate	2.05E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.05E-03	1.83E+01	1.12E-04	1.83E+02	1.12E-05	0.02%	0.01%
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	0.00E+00	3.74E-04	0.00E+00	0.00E+00	1.02E-02	0.00E+00	1.51E-03	0.00E+00	8.62E-03	1.85E-03	2.25E-02	1.00E+00	2.25E-02	1.00E+01	2.25E-03	3.74%	2.45%
Chlordane	0.00E+00	0.00E+00	1.83E-07	0.00E+00	0.00E+00	3.08E-06	0.00E+00	3.16E-08	0.00E+00	5.26E-06	1.13E-06	9.69E-06	4.58E+00	2.12E-06	9.16E+00	1.06E-06	0.00%	0.00%
Chromium	0.00E+00	0.00E+00	1.10E-02	0.00E+00	0.00E+00	3.72E-02	0.00E+00	2.26E-02	0.00E+00	9.16E-02	1.96E-02	1.82E-01	3.28E+00	5.55E-02	1.31E+01	1.39E-02	9.21%	15.07%
cis-Nonachlor	0.00E+00	0.00E+00	2.39E-07	0.00E+00	0.00E+00	4.03E-06	0.00E+00	4.12E-08	0.00E+00	6.87E-06	1.47E-06	1.27E-05	4.58E+00	2.76E-06	9.16E+00	1.38E-06	0.00%	0.00%
Copper	1.20E-03	0.00E+00	6.97E-03	0.00E+00	0.00E+00	9.90E-03	0.00E+00	1.72E-02	0.00E+00	2.60E-02	5.57E-03	6.69E-02	1.17E+01	5.71E-03	1.51E+01	4.42E-03	0.95%	4.80%
Dieldrin	0.00E+00	0.00E+00	1.79E-07	0.00E+00	0.00E+00	2.92E-06	0.00E+00	1.25E-06	0.00E+00	5.14E-06	1.10E-06	1.06E-05	2.00E-02	5.29E-04	2.00E-01	5.29E-05	0.09%	0.06%
Endrin	0.00E+00	0.00E+00	2.62E-07	0.00E+00	0.00E+00	4.29E-06	0.00E+00	4.29E-08	0.00E+00	7.97E-06	1.71E-06	1.43E-05	9.20E-02	1.55E-04	9.20E-01	1.55E-05	0.03%	0.02%
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	0.00E+00	2.24E-07	0.00E+00	0.00E+00	3.71E-06	0.00E+00	1.81E-08	0.00E+00	6.43E-06	1.38E-06	1.18E-05	8.00E-02	1.47E-04	2.90E-01	4.06E-05	0.02%	0.04%
HMX	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	2.65E-01	0.00E+00	9.53E+00	0.00E+00	0.00E+00	7.95E-01	0.00E+00	1.63E-01	0.00E+00	4.92E-01	1.05E-01	1.13E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	6.56E-04	0.00E+00	2.18E-02	0.00E+00	0.00E+00	1.04E-02	0.00E+00	6.21E-03	0.00E+00	7.25E-03	1.55E-03	4.79E-02	8.00E+00	5.99E-03	8.00E+01	5.99E-04	0.99%	0.65%
Manganese	2.31E-02	0.00E+00	9.12E-01	0.00E+00	0.00E+00	2.14E-01	0.00E+00	3.90E-01	0.00E+00	2.18E-01	4.67E-02	1.80E+00	8.80E+01	2.05E-02	2.84E+02	6.35E-03	3.40%	6.90%
Mercury (inorganic)	0.00E+00	0.00E+00	5.39E-05	0.00E+00	0.00E+00	4.25E-04	NA	3.17E-04	0.00E+00	1.38E-04	2.97E-05	9.64E-04	1.00E+00	9.64E-04	3.00E+00	3.21E-04	0.16%	0.35%
Mercury (methyl)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	1.50E-02	0.00E+00	2.50E-02	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	0.00E+00	3.25E-07	0.00E+00	0.00E+00	5.64E-06	0.00E+00	4.78E-08	0.00E+00	9.35E-06	2.00E-06	1.74E-05	7.00E-02	2.48E-04	7.00E-01	2.48E-05	0.04%	0.03%
Nickel	0.00E+00	0.00E+00	6.47E-03	0.00E+00	0.00E+00	3.27E-02	NA	1.86E-03	0.00E+00	1.63E-02	3.50E-03	6.09E-02	4.00E+01	1.52E-03	8.00E+01	7.61E-04	0.25%	0.83%
Nitrate	7.48E-02	0.00E+00	1.77E-03	0.00E+00	0.00E+00	2.15E-03	0.00E+00	2.64E-03	0.00E+00	7.32E-03	1.57E-03	9.03E-02	5.07E+02	1.78E-04	1.13E+03	7.99E-05	0.03%	0.09%
Nitrate/Nitrite	6.86E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.86E-03	5.07E+02	1.35E-05	1.13E+03	6.07E-06	0.00%	0.01%
Oxychlordane	0.00E+00	0.00E+00	1.74E-07	0.00E+00	0.00E+00	2.84E-06	0.00E+00	1.96E-08	0.00E+00	5.00E-06	1.07E-06	9.11E-06	4.58E+00	1.99E-06	9.16E+00	9.94E-07	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	0.00E+00	8.55E-07	0.00E+00	0.00E+00	1.39E-05	0.00E+00	1.22E-07	0.00E+00	2.46E-05	5.27E-06	4.47E-05	2.40E-01	1.86E-04	2.40E+00	1.86E-05	0.03%	0.02%
Pentachlorophenol	0.00E+00	0.00E+00	5.04E-04	0.00E+00	0.00E+00	8.01E-03	0.00E+00	1.52E-04	0.00E+00	1.45E-02	3.11E-03	2.63E-02	2.40E-01	1.09E-01	2.40E+00	1.09E-02	18.16%	11.90%
Perchlorate	0.00E+00	0.00E+00	8.54E-05	0.00E+00	0.00E+00	1.04E-04	NA	1.09E-02	0.00E+00	3.54E-04	7.59E-05	1.16E-02	8.50E+00	1.36E-03	2.55E+01	4.53E-04	0.23%	0.49%
Selenium	3.16E-04	0.00E+00	3.76E-04	0.00E+00	0.00E+00	4.79E-04	0.00E+00	7.44E-04	0.00E+00	1.83E-03	3.92E-04	4.14E-03	2.00E-01	2.07E-02	3.30E-01	1.25E-02	3.43%	13.63%
Silver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	0.00E+00	1.35E-02	0.00E+00	0.00E+00	4.02E-03	0.00E+00	2.02E-02	0.00E+00	5.60E-02	1.20E-02	1.06E-01	2.63E+02	4.02E-04	7.89E+02	1.34E-04	0.07%	0.15%
Sulfate	1.20E+00	0.00E+00	1.95E+00	0.00E+00	0.00E+00	2.38E+00	0.00E+00	2.92E+00	0.00E+00	8.09E+00	1.73E+00	1.83E+01	NA	NA	NA	NA	NA	NA
Thallium	1.44E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.44E-04	7.40E-03	1.94E-02	7.40E-02	1.94E-03	3.22%	2.11%
trans-Nonachlor	0.00E+00	0.00E+00	2.99E-07	0.00E+00	0.00E+00	5.04E-06	0.00E+00	5.16E-08	0.00E+00	8.61E-06	1.84E-06	1.58E-05	4.58E+00	3.46E-06	9.16E+00	1.73E-06	0.00%	0.00%
Vanadium	0.00E+00	0.00E+00	1.46E-02	0.00E+00	0.00E+00	1.37E-03	0.00E+00	2.49E-04	0.00E+00	2.15E-03	4.61E-04	1.88E-02	2.10E-01	8.95E-02	2.10E+00	8.95E-03	14.84%	9.73%
Zinc	7.41E-03	0.00E+00	5.65E-02	0.00E+00	0.00E+00	3.31E-01	0.00E+00	1.94E-01	0.00E+00	6.36E-01	1.36E-01	1.36E+00	1.60E+02	8.51E-03	3.20E+02	4.26E-03	1.41%	4.63%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.4E-05	7.2E-06	0.00%	0.01%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	4.9E-04	9.7E-05	0.08%	0.11%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.3E-02	1.3E-03	2.24%	1.45%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	1.1E-04	1.1E-05	0.02%	0.01%
Aldrin/Dieldrin/Endrin EEQ:	7.4E-04	7.9E-05	0.12%	0.09%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text tables.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0.12	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0.03	unitless
Mammal diet fraction =	0.7	unitless
Bird diet fraction =	0.15	unitless
Soil ingestion rate =	0.004263	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.152	kg/d
Body weight =	4.5	kg
Home range =	247.1044	acres
Water intake rate =	0.38	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-62
Tier 2 COPCs
EEQs and Hazard Indices for the Red Fox at LHAAP
Low Impact Sub-Area/Goose Praire Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Total Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
									---Unitless---						
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01
2,3,7,8-TCDD TEQ	7.00E-09	mg/L	1.27E-06	mg/kg	3.18E-06	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01
4,4'-DDD	0.00E+00	mg/L	2.56E-03	mg/kg	8.25E-04	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	3.08E-03	mg/kg	1.00E+00		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01
4,4'-DDT	0.00E+00	mg/L	2.61E-03	mg/kg	1.10E-03	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.81E-04	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.11E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Aluminum	1.73E+00	mg/L	8.98E+03	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.12E-01	mg/kg	1.00E+00			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.17E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01
Aroclor 1254	0.00E+00	mg/L	4.20E-02	mg/kg	3.27E-03	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	4.04E-03	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.43E-04	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	2.19E-02	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01
bis(2-ethylhexyl)phthalate	1.43E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01
Cadmium	0.00E+00	mg/L	4.84E-01	mg/kg	3.19E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	2.80E+01	8.58E-01	1.03E+00	1.03E+00	6.72E-01	6.72E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.16E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.09E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.19E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Copper	1.23E-02	mg/L	1.08E+01	mg/kg	6.48E+00	mg/kg	1.00E+00	1.11E+03	1.56E+00	1.46E+00	4.57E-01	6.25E-01	6.25E-01	8.97E-02	8.97E-02
Dieldrin	0.00E+00	mg/L	2.57E-03	mg/kg	1.76E-04	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.64E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.04E-04	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01
Iron	2.68E+00	mg/L	0.00E+00	mg/kg	9.10E+03	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E+01	1.39E+01	1.39E+01		
Lead	6.26E-03	mg/L	5.97E+01	mg/kg	2.03E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	4.57E-01	4.37E-02	7.03E-02	7.03E-02	1.16E-02	1.16E-02
Manganese	2.12E-01	mg/L	0.00E+00	mg/kg	8.30E+02	mg/kg	1.00E+00	2.50E+02	4.20E-01	2.26E-01	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.07E-02	mg/kg	1.00E+00		1.14E+00	7.97E+00	NA	1.45E+00	1.45E+00	9.15E-02	9.15E-02
Mercury (methyl)	0.00E+00	mg/L	2.09E-01	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	7.56E-01	NA	NA		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.87E-04	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01
Nickel	0.00E+00	mg/L	0.00E+00	mg/kg	6.19E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	NA	6.89E-02	6.89E-02	8.71E-02	8.71E-02
Nitrate	4.70E-01	mg/L	0.00E+00	mg/kg	1.13E+00	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Nitrate/Nitrite	6.18E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E-04	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.57E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	3.80E-01	mg/kg	1.00E+00			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	4.97E-02	mg/kg	1.00E+00			3.00E-01	NA	3.82E+01	3.82E+01	1.11E-01	1.11E-01
Selenium	3.23E-03	mg/L	1.10E+00	mg/kg	3.70E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.21E+00	5.12E-01	4.59E-01	4.59E-01	1.51E-01	1.51E-01
Silver	0.00E+00	mg/L	2.05E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.30E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Sulfate	1.10E+01	mg/L	4.59E+00	mg/kg	1.38E+03	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Thallium	1.00E-03	mg/L	6.22E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.64E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Vanadium	0.00E+00	mg/L	0.00E+00	mg/kg	1.45E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03
Zinc	6.50E-02	mg/L	7.78E+01	mg/kg	4.80E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	6.34E+00	7.15E-01	8.84E-01	8.84E-01	1.84E-01	1.84E-01

Chemical	EED Surface Water (mg/kg-d)	EED Sediment (mg/kg-d)	EED Soil (mg/kg-d)	EED Fish (mg/kg-d)	EED Aq. Invert. (mg/kg-d)	EED Terr. Invert. (mg/kg-d)	EED Aq. Plants (mg/kg-d)	EED Terr. Plants (mg/kg-d)	EED Plant Roots (mg/kg-d)	EED Mammals (mg/kg-d)	EED Birds (mg/kg-d)	Total EED (mg/kg-d)	NOAEL (mg/kg-d)	EEQ N	LOAEL (mg/kg-d)	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	5.91E-10	0.00E+00	3.01E-09	0.00E+00	0.00E+00	3.55E-08	0.00E+00	5.00E-11	0.00E+00	3.56E-09	7.62E-10	4.35E-08	1.00E-06	4.35E-02	1.00E-05	4.35E-03	11.65%	7.64%
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	0.00E+00	7.82E-07	0.00E+00	0.00E+00	7.48E-06	0.00E+00	9.36E-08	0.00E+00	1.71E-05	3.66E-06	2.91E-05	8.00E-01	3.64E-05	4.00E+00	7.28E-06	0.01%	0.01%
4,4'-DDE	0.00E+00	0.00E+00	2.92E-06	0.00E+00	0.00E+00	2.81E-05	0.00E+00	1.70E-06	0.00E+00	6.87E-05	1.47E-05	1.16E-04	8.00E-01	1.45E-04	4.00E+00	2.90E-05	0.04%	0.05%
4,4'-DDT	0.00E+00	0.00E+00	1.04E-06	0.00E+00	0.00E+00	1.03E-05	0.00E+00	1.25E-07	0.00E+00	2.31E-05	4.94E-06	3.95E-05	8.00E-01	4.94E-05	4.00E+00	9.88E-06	0.01%	0.02%
Aldrin	0.00E+00	0.00E+00	1.71E-07	0.00E+00	0.00E+00	1.70E-06	0.00E+00	3.57E-09	0.00E+00	3.75E-06	8.04E-07	6.43E-06	2.00E-01	3.21E-05	1.00E+00	6.43E-06	0.01%	0.01%
alpha-Chlordane	0.00E+00	0.00E+00	2.95E-07	0.00E+00	0.00E+00	2.87E-06	0.00E+00	1.18E-08	0.00E+00	6.45E-06	1.38E-06	1.10E-05	4.58E+00	2.40E-06	9.16E+00	1.20E-06	0.00%	0.00%
Aluminum	1.46E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.46E-01	1.93E+00	7.57E-02	1.93E+01	7.57E-03	20.27%	13.30%
Antimony	0.00E+00	0.00E+00	4.85E-04	0.00E+00	0.00E+00	1.56E-04	0.00E+00	7.68E-05	0.00E+00	1.34E-03	2.87E-04	2.34E-03	1.25E-01	1.88E-02	1.25E+00	1.88E-03	5.02%	3.30%
Aroclor 1242	0.00E+00	0.00E+00	2.40E-06	0.00E+00	0.00E+00	2.34E-05	0.00E+00	8.61E-08	0.00E+00	5.25E-05	1.12E-05	8.96E-05	6.85E-02	1.31E-03	6.85E-01	1.31E-04	0.35%	0.23%
Aroclor 1248	0.00E+00	0.00E+00	1.11E-06	0.00E+00	0.00E+00	1.08E-05	0.00E+00	3.98E-08	0.00E+00	2.43E-05	5.20E-06	4.14E-05	6.80E-02	6.09E-04	6.90E-01	6.00E-05	0.16%	0.11%
Aroclor 1254	0.00E+00	0.00E+00	3.10E-06	0.00E+00	0.00E+00	3.10E-05	0.00E+00	4.75E-08	0.00E+00	3.85E-05	8.25E-06	8.09E-05	6.80E-02	1.19E-03	6.90E-01	1.17E-04	0.32%	0.21%
Aroclor 1260	0.00E+00	0.00E+00	3.82E-06	0.00E+00	0.00E+00	4.02E-05	0.00E+00	1.05E-08	0.00E+00	1.59E-04	3.42E-05	2.38E-04	6.80E-02	3.49E-03	6.90E-01	3.44E-04	0.94%	0.61%
Aroclor 1268	0.00E+00	0.00E+00	7.99E-07	0.00E+00	0.00E+00	6.90E-06	0.00E+00	1.80E-06	0.00E+00	1.75E-05	3.74E-06	3.07E-05	6.80E-02	4.52E-04	6.90E-01	4.45E-05	0.12%	0.08%
Barium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E+00	0.00E+00	1.98E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	0.00E+00	2.08E-05	0.00E+00	0.00E+00	1.70E-04	0.00E+00	2.86E-04	0.00E+00	4.54E-04	9.73E-05	1.03E-03	4.00E+00	2.57E-04	4.00E+01	2.57E-05	0.07%	0.05%
bis(2-ethylhexyl)phthalate	1.21E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.21E-03	1.83E+01	6.58E-05	1.83E+02	6.59E-06	0.02%	0.01%
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	0.00E+00	3.03E-04	0.00E+00	0.00E+00	9.08E-03	0.00E+00	1.34E-03	0.00E+00	5.08E-03	1.09E-03	1.69E-02	1.00E+00	1.69E-02	1.00E+01	1.69E-03	4.52%	2.97%
Chlordane	0.00E+00	0.00E+00	2.04E-07	0.00E+00	0.00E+00	1.99E-06	0.00E+00	8.15E-09	0.00E+00	4.47E-06	9.57E-07	7.62E-06	4.58E+00	1.66E-06	9.16E+00	8.32E-07	0.00%	0.00%
Chromium	0.00E+00	0.00E+00	1.03E-02	0.00E+00	0.00E+00	3.37E-03	0.00E+00	1.81E-03	0.00E+00	2.17E-02	4.66E-03	4.19E-02	3.28E+00	1.28E-02	1.31E+01	3.19E-03	3.42%	5.60%
cis-Nonachlor	0.00E+00	0.00E+00	2.08E-07	0.00E+00	0.00E+00	2.02E-06	0.00E+00	8.30E-09	0.00E+00	4.55E-06	9.75E-07	7.76E-06	4.58E+00	1.69E-06	9.16E+00	8.47E-07	0.00%	0.00%
Copper	1.03E-03	0.00E+00	6.14E-03	0.00E+00	0.00E+00	9.60E-03	0.00E+00	1.64E-02	0.00E+00	1.37E-02	2.95E-03	4.99E-02	1.17E+01	4.26E-03	1.51E+01	3.29E-03	1.14%	5.79%
Dieldrin	0.00E+00	0.00E+00	1.67E-07	0.00E+00	0.00E+00	1.57E-06	0.00E+00	1.71E-08	0.00E+00	3.65E-06	7.82E-07	6.19E-06	2.00E-02	3.09E-04	2.00E-01	3.09E-05	0.08%	0.05%
Endrin	0.00E+00	0.00E+00	2.50E-07	0.00E+00	0.00E+00	2.36E-06	0.00E+00	2.94E-08	0.00E+00	7.59E-06	1.63E-06	1.19E-05	9.20E-02	1.29E-04	9.20E-01	1.29E-05	0.03%	0.02%
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	0.00E+00	1.93E-07	0.00E+00	0.00E+00	1.85E-06	0.00E+00	1.31E-08	0.00E+00	4.23E-06	9.06E-07	7.19E-06	8.00E-02	8.99E-05	2.90E-01	2.48E-05	0.02%	0.04%
HMX	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	2.27E-01	0.00E+00	8.62E+00	0.00E+00	0.00E+00	3.32E-01	0.00E+00	1.48E-01	0.00E+00	3.78E-01	8.11E-02	9.79E+00	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	5.28E-04	0.00E+00	1.93E-02	0.00E+00	0.00E+00	9.42E-03	0.00E+00	5.79E-03	0.00E+00	5.60E-03	1.20E-03	4.18E-02	8.00E+00	5.22E-03	8.00E+01	5.22E-04	1.40%	0.92%
Manganese	1.79E-02	0.00E+00	7.86E-01	0.00E+00	0.00E+00	1.90E-01	0.00E+00	2.66E-01	0.00E+00	1.49E-01	3.19E-02	1.44E+00	8.80E+01	1.64E-02	2.84E+02	5.07E-03	4.38%	8.91%
Mercury (inorganic)	0.00E+00	0.00E+00	4.80E-05	0.00E+00	0.00E+00	4.09E-04	NA	2.98E-04	0.00E+00	1.10E-04	2.35E-05	8.89E-04	1.00E+00	8.89E-04	3.00E+00	2.96E-04	0.24%	0.52%
Mercury (methyl)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	1.50E-02	0.00E+00	2.50E-02	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	0.00E+00	2.72E-07	0.00E+00	0.00E+00	2.72E-06	0.00E+00	4.00E-09	0.00E+00	5.95E-06	1.27E-06	1.02E-05	7.00E-02	1.46E-04	7.00E-01	1.46E-05	0.04%	0.03%
Nickel	0.00E+00	0.00E+00	5.86E-03	0.00E+00	0.00E+00	6.64E-03	NA	1.73E-03	0.00E+00	1.27E-02	2.73E-03	2.97E-02	4.00E+01	7.42E-04	8.00E+01	3.71E-04	0.20%	0.65%
Nitrate	3.97E-02	0.00E+00	1.07E-03	0.00E+00	0.00E+00	3.43E-04	0.00E+00	9.60E-04	0.00E+00	2.95E-03	6.33E-04	4.57E-02	5.07E+02	9.01E-05	1.13E+03	4.04E-05	0.02%	0.07%
Nitrate/Nitrite	5.22E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.22E-03	5.07E+02	1.03E-05	1.13E+03	4.62E-06	0.00%	0.01%
Oxychlordane	0.00E+00	0.00E+00	1.62E-07	0.00E+00	0.00E+00	1.52E-06	0.00E+00	1.82E-08	0.00E+00	3.54E-06	7.58E-07	6.00E-06	4.58E+00	1.31E-06	9.16E+00	6.55E-07	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	0.00E+00	5.28E-07	0.00E+00	0.00E+00	4.94E-06	0.00E+00	6.19E-08	0.00E+00	1.15E-05	2.47E-06	1.95E-05	2.40E-01	8.14E-05	2.40E+00	8.14E-06	0.02%	0.01%
Pentachlorophenol	0.00E+00	0.00E+00	3.60E-04	0.00E+00	0.00E+00	3.29E-03	0.00E+00	6.55E-05	0.00E+00	7.87E-03	1.69E-03	1.33E-02	2.40E-01	5.53E-02	2.40E+00	5.53E-03	14.82%	9.72%
Perchlorate	0.00E+00	0.00E+00	4.71E-05	0.00E+00	0.00E+00	1.51E-05	NA	7.70E-03	0.00E+00	1.30E-04	2.79E-05	7.92E-03	8.50E+00	9.32E-04	2.55E+01	3.11E-04	0.25%	0.55%
Selenium	2.72E-04	0.00E+00	3.51E-04	0.00E+00	0.00E+00	4.55E-04	0.00E+00	6.89E-04	0.00E+00	1.32E-03	2.83E-04	3.37E-03	2.00E-01	1.69E-02	3.30E-01	1.02E-02	4.52%	17.96%
Silver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	0.00E+00	1.23E-02	0.00E+00	0.00E+00	1.15E-03	0.00E+00	1.11E-02	0.00E+00	3.40E-02	7.29E-03	6.58E-02	2.63E+02	2.50E-04	7.89E+02	8.34E-05	0.07%	0.15%
Sulfate	9.30E-01	0.00E+00	1.30E+00	0.00E+00	0.00E+00	4.19E-01	0.00E+00	1.17E+00	0.00E+00	3.61E+00	7.73E-01	8.21E+00	NA	NA	NA	NA	NA	NA
Thallium	8.46E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.46E-05	7.40E-03	1.14E-02	7.40E-02	1.14E-03	3.06%	2.01%
trans-Nonachlor	0.00E+00	0.00E+00	2.50E-07	0.00E+00	0.00E+00	2.43E-06	0.00E+00	9.96E-09	0.00E+00	5.46E-06	1.17E-06	9.32E-06	4.58E+00	2.03E-06	9.16E+00	1.02E-06	0.00%	0.00%
Vanadium	0.00E+00	0.00E+00	1.37E-02	0.00E+00	0.00E+00	6.16E-04	0.00E+00	2.11E-04	0.00E+00	1.88E-03	4.02E-04	1.68E-02	2.10E-01	8.01E-02	2.10E+00	8.01E-03	21.44%	14.07%
Zinc	5.49E-03	0.00E+00	4.54E-02	0.00E+00	0.00E+00	3.08E-01	0.00E+00	1.72E-01	0.00E+00	2.09E-01	4.47E-02	7.84E-01	1.60E+02	4.90E-03	3.20E+02	2.45E-03	1.31%	4.31%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	9.1E-06	4.6E-06	0.00%	0.01%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	2.3E-04	4.6E-05	0.06%	0.08%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	7.1E-03	7.0E-04	1.89%	1.23%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	6.6E-05	6.6E-06	0.02%	0.01%
Aldrin/Dieldrin/Endrin EEQ:	4.7E-04	5.0E-05	0.13%	0.09%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0.12	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0.03	unitless
Mammal diet fraction =	0.7	unitless
Bird diet fraction =	0.15	unitless
Soil ingestion rate =	0.004263	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.152	kg/d
Body weight =	4.5	kg
Home range =	2565	acres
Water intake rate =	0.38	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-63
Tier 1 COPCs
EEQs and Hazard Indices for the Muskrat at LHAAP
Low Impact Sub-Area/Goose Praire Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
									----------	----------	Unitless	----------	----------			mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	8.59E-09	mg/L	1.56E-06	mg/kg	3.95E-06	mg/kg	#######	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	8.34E-10	1.08E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.34E-10	1.32E-10	2.34E-10	0.00E+00	0.00E+00	1.22E-08	1.00E-06	1.22E-02	1.00E-05	1.22E-03	0.03%	0.03%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	mg/L	2.97E-03	mg/kg	1.40E-03	mg/kg	#######		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	2.05E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.85E-06	8.22E-07	7.85E-06	0.00E+00	0.00E+00	3.70E-05	8.00E-01	4.63E-05	4.00E+00	9.26E-06	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	4.30E-03	mg/kg	#######		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.96E-05	0.00E+00	0.00E+00	0.00E+00	1.96E-05	8.00E-01	2.44E-05	4.00E+00	4.89E-06	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	3.04E-03	mg/kg	2.23E-03	mg/kg	#######		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	2.10E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.03E-06	1.31E-06	8.03E-06	0.00E+00	0.00E+00	3.83E-05	8.00E-01	4.79E-05	4.00E+00	9.59E-06	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.87E-04	mg/kg	#######			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.30E-09	0.00E+00	0.00E+00	0.00E+00	9.30E-09	2.00E-01	4.65E-08	1.00E+00	9.30E-09	0.00%	0.00%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.76E-04	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E-07	0.00E+00	0.00E+00	0.00E+00	1.11E-07	4.58E+00	2.43E-08	9.16E+00	1.21E-08	0.00%	0.00%
Aluminum	2.10E+00	mg/L	1.03E+04	mg/kg	0.00E+00	mg/kg	#######	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	2.04E-01	7.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.81E-01	0.00E+00	7.81E-01	0.00E+00	0.00E+00	7.27E+01	1.93E+00	3.77E+01	1.93E+01	3.77E+00	91.68%	81.62%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	6.37E-01	mg/kg	#######			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.27E-04	0.00E+00	0.00E+00	0.00E+00	3.27E-04	1.25E-01	2.62E-03	1.25E+00	2.62E-04	0.01%	0.01%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.07E-03	mg/kg	#######			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.67E-06	0.00E+00	0.00E+00	0.00E+00	3.67E-06	6.85E-02	5.36E-05	6.85E-01	5.36E-06	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.42E-03	mg/kg	#######			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E-07	0.00E+00	0.00E+00	0.00E+00	1.05E-07	6.80E-02	1.55E-06	6.80E-01	1.55E-07	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	5.10E-02	mg/kg	4.11E-03	mg/kg	#######		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	3.52E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.49E-05	2.67E-07	1.49E-05	0.00E+00	0.00E+00	3.82E-04	6.80E-02	5.61E-03	6.80E-01	5.61E-04	0.01%	0.01%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	7.47E-03	mg/kg	#######			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.49E-07	0.00E+00	0.00E+00	0.00E+00	2.49E-07	6.80E-02	3.66E-06	6.80E-01	3.66E-07	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.50E-04	mg/kg	#######			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.28E-06	0.00E+00	0.00E+00	0.00E+00	3.28E-06	6.80E-02	4.82E-05	6.80E-01	4.82E-06	0.00%	0.00%
Barium	0.00E+00	mg/L	1.34E+02	mg/kg	0.00E+00	mg/kg	#######	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	9.22E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.06E+00	0.00E+00	4.06E+00	0.00E+00	0.00E+00	9.05E+00	5.10E+00	1.77E+00	1.98E+01	4.57E-01	4.32%	9.90%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	6.80E-02	mg/kg	#######			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.60E-03	0.00E+00	0.00E+00	0.00E+00	1.60E-03	4.00E+00	4.01E-04	4.00E+01	4.01E-05	0.00%	0.00%
bis(2-ethylhexyl)phthalate	2.43E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	2.36E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.36E-03	1.83E+01	1.29E-04	1.83E+02	1.29E-05	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	mg/L	5.24E-01	mg/kg	3.84E-01	mg/kg	#######	1.63E+03	7.99E+00	2.58E+01	8.28E-01	9.52E-01	8.28E-01	9.22E-01	9.22E-01	0.00E+00	3.61E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.43E-02	2.68E-03	1.43E-02	0.00E+00	0.00E+00	3.49E-02	1.00E+00	3.49E-02	1.00E+01	3.49E-03	0.08%	0.08%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.88E-04	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.55E-08	0.00E+00	0.00E+00	0.00E+00	5.55E-08	4.58E+00	1.21E-08	9.16E+00	6.05E-09	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.22E+01	mg/kg	#######	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.31E-02	0.00E+00	0.00E+00	0.00E+00	4.31E-02	3.28E+00	1.31E-02	1.31E+01	3.28E-03	0.03%	0.07%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-04	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.32E-08	0.00E+00	0.00E+00	0.00E+00	7.32E-08	4.58E+00	1.60E-08	9.16E+00	7.99E-09	0.00%	0.00%
Copper	1.42E-02	mg/L	1.27E+01	mg/kg	7.43E+00	mg/kg	#######	5.92E+03	5.25E+00	1.32E+00	4.15E-01	5.75E-01	4.15E-01	1.49E-01	1.49E-01	1.38E-03	8.73E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E-01	3.13E-02	1.74E-01	0.00E+00	0.00E+00	4.67E-01	1.17E+01	3.99E-02	1.51E+01	3.09E-02	0.10%	0.67%
Dieldrin	0.00E+00	mg/L	3.00E-03	mg/kg	1.86E-04	mg/kg	#######		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	2.07E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.62E-04	2.23E-06	1.62E-04	0.00E+00	0.00E+00	3.47E-04	2.00E-02	1.74E-02	2.00E-01	1.74E-03	0.04%	0.04%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.75E-04	mg/kg	#######			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.72E-08	0.00E+00	0.00E+00	0.00E+00	7.72E-08	9.20E-02	8.39E-07	9.20E-01	8.39E-08	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.20E-04	mg/kg	#######			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.05E-08	0.00E+00	0.00E+00	0.00E+00	3.05E-08	8.00E-02	3.81E-07	2.90E-01	1.05E-07	0.00%	0.00%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	3.14E+00	mg/L	0.00E+00	mg/kg	1.00E+04	mg/kg	#######	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	3.05E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.94E-01	0.00E+00	0.00E+00	0.00E+00	6.00E-01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	7.76E-03	mg/L	7.66E+01	mg/kg	2.51E+01	mg/kg	#######	1.50E+03	6.07E-01	4.39E-01	3.92E-02	6.40E-02	3.92E-02	1.33E-02	1.33E-02	7.54E-04	5.28E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.91E-02	1.18E-02	9.91E-02	0.00E+00	0.00E+00	7.39E-01	8.00E+00	9.23E-02	8.00E+01	9.23E-03	0.22%	0.20%
Manganese	2.73E-01	mg/L	0.00E+00	mg/kg	9.35E+02	mg/kg	#######	2.00E+03	2.10E+00	2.21E-01	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	2.65E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.86E-01	0.00E+00	0.00E+00	0.00E+00	7.13E-01	8.80E+01	8.10E-03	2.84E+02	2.51E-03	0.02%	0.05%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.95E-02	mg/kg	#######		2.87E+00	7.16E+00	NA	1.35E+00	NA	1.03E-01	1.03E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	5.88E-04	NA	0.00E+00	0.00E+00	5.88E-04	1.32E+01	4.45E-05	3.96E+01	1.48E-05	0.00%	0.00%
Mercury (methyl)	0.00E+00	mg/L	2.65E-01	mg/kg	0.00E+00	mg/kg	#######		2.87E+00	NA	6.78E-01	NA	6.78E-01			0.00E+00	1.82E-03	0.00E+00	0.00E+00	0.00E+00	NA	5.92E-03	NA	5.92E-03	0.00E+00	0.00E+00	1.37E-02	3.20E-02	4.27E-01	1.60E-01	8.54E-02	1.04%	1.85%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.41E-04	mg/kg	#######			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.60E-08	0.00E+00	0.00E+00	0.00E+00	8.60E-08	7.00E-02	1.23E-06	7.00E-01	1.23E-07	0.00%	0.00%
Nickel	0.00E+00	mg/L	0.00E+00	mg/kg	7.10E+00	mg/kg	#######		2.32E+00	4.73E+00	NA	6.65E-02	NA	1.01E-01	1.01E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	3.47E-03	NA	0.00E+00	0.00E+00	3.47E-03	4.00E+01	8.67E-05	8.00E+01	4.33E-05	0.00%	0.00%
Nitrate	8.86E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	8.60E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.60E-02	5.07E+02	1.70E-04	1.13E+03	7.61E-05	0.00%	0.00%
Nitrate/Nitrite	8.12E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	1.07E+03								7.88E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.88E-03	5.07E+02	1.55E-05	1.13E+03	6.98E-06	0.00%	0.00%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	#######			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.40E-08	0.00E+00	0.00E+00	0.00E+00	3.40E-08	4.58E+00	7.42E-09	9.16E+00	3.71E-09	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	8.83E-04	mg/kg	#######			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.17E-07	0.00E+00	0.00E+00	0.00E+00	2.17E-07	2.40E-01	9.03E-07	2.40E+00	9.03E-08	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	4.23E-01	mg/kg	#######			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.19E-04	0.00E+00	0.00E+00	0.00E+00	2.19E-04	2.40E-01	9.11E-04	2.40E+00	9.11E-05	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.80E-01	mg/kg	#######			1.14E+00	NA	1.88E+01	1.88E+01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	3.86E-02	0.00E+00	0.00E+00	0.00E+00	3.86E-02	8.50E+00	4.54E-03	2.55E+01	1.51E-03	0.01%	0.03%
Selenium	3.74E-03	mg/L	1.29E+00	mg/kg	4.13E-01	mg/kg	#######	2.05E+02	4.50E+00	1.18E+00	5.20E-01	4.64E-01	5.20E-01	1.95E-01	1.95E-01	3.63E-04	8.90E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.21E-02	1.40E-03	2.21E-02	0.00E+00	0.00E+00	5.49E-02	2.00E-01	2.75E-01	3.30E-01	1.66E-01	0.67%	3.61%
Silver	0.00E+00	mg/L	2.66E+00	mg/kg	0.00E+00	mg/kg	#######		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	1.83E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.49E-02	0.00E+00	1.49E-02	0.00E+00	0.00E+00	4.82E-02	1.90E+01	2.53E-03	5.70E+01	8.45E-04	0.01%	0.02%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+01	mg/kg	#######		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.66E-02	0.00E+00	0.00E+00	0.00E+00	3.66E-02	2.63E+02	1.39E-04	7.89E+02	4.64E-05	0.00%	0.00%
Sulfate	1.42E+01	mg/L	6.05E+00	mg/kg	2.30E+02	mg/kg	#######	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	1.38E+00	4.17E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.99E-02	5.90E-01	6.99E-02	0.00E+00	0.00E+00	2.16E+00	NA	NA	NA	NA	NA	NA
Thallium	1.70E-03	mg/L	7.02E-01	mg/kg	0.00E+00	mg/kg	#######	1.59E+04	4.50E+00							1.65E-04	4.84E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-03	7.40E-03	6.76E-01	7.40E-02	6.76E-02	1.65%	1.46%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.04E-04	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.98E-08	0.00E+00	0.00E+00	0.00E+00	8.98E-08	4.58E+00	1.96E-08	9.16E+00	9.80E-09	0.00%	0.00%
Vanadium	0.00E+00	mg/L	0.00E+00	mg/kg	1.53E+01	mg/kg	#######	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.50E-04	0.00E+00	0.00E+00	0.00E+00	4.50E-04	2.10E-01	2.14E-03	2.10E+00	2.14E-04	0.01%	0.00%
Zinc	8.78E-02	mg/L	9.41E+01	mg/kg	5.89E+01	mg/kg	#######	5.00E+03	7.53E+00	5.53E+00	6.57E-01	8.08E-01	6.57E-01	4.51E-01	4.51E-01	8.52E-03	6.48E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.04E+00	3.49E-01	2.04E+00	0.00E+00	0.00E+00	5.09E+00	1.60E+02	3.18E-02	3.20E+02	1.59E-02	0.08%	0.34%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	7.9E-08	4.0E-08	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	1.2E-04	2.4E-05	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	5.7E-03	5.7E-04	0.01%	0.01%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	1.3E-04	1.3E-05	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	1.7E-02	1.7E-03	0.04%	0.04%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text tables.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0.1	unitless
Aquatic plant diet fraction =	0.45	unitless
Plant root diet fraction =	0.45	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0.008093	kg/d
Food ingestion rate =	0.0861	kg/d
Body weight =	1.174	kg
Home range =	0.11861	acres
Water intake rate =	0.114	L/d
Site Area =	246	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-64
Tier 2 COPCs
EEQs and Hazard Indices for the Muskrat at LHAAP
Low Impact Sub-Area/Goose Praire Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
							Unitless								
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01
2,3,7,8-TCDD TEQ	7.00E-09	mg/L	1.27E-06	mg/kg	3.18E-06	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01
4,4'-DDD	0.00E+00	mg/L	2.56E-03	mg/kg	8.00E-04	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	3.10E-03	mg/kg	1.00E+00		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01
4,4'-DDT	0.00E+00	mg/L	2.61E-03	mg/kg	1.07E-03	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.15E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Aluminum	1.73E+00	mg/L	8.98E+03	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-01	mg/kg	1.00E+00			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.55E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.21E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01
Aroclor 1254	0.00E+00	mg/L	4.20E-02	mg/kg	3.32E-03	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	4.07E-03	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	7.92E-04	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	5.10E-02	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01
bis(2-ethylhexyl)phthalate	1.43E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01
Cadmium	0.00E+00	mg/L	4.84E-01	mg/kg	3.02E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	2.87E+01	8.58E-01	1.06E+00	8.58E-01	6.72E-01	6.72E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Copper	1.23E-02	mg/L	1.08E+01	mg/kg	6.53E+00	mg/kg	1.00E+00	1.11E+03	1.56E+00	1.45E+00	4.57E-01	6.22E-01	4.57E-01	8.97E-02	8.97E-02
Dieldrin	0.00E+00	mg/L	2.57E-03	mg/kg	1.72E-04	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.93E-04	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01
Iron	2.68E+00	mg/L	0.00E+00	mg/kg	9.10E+03	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E+01	1.39E+01	1.39E+01		
Lead	6.26E-03	mg/L	5.97E+01	mg/kg	2.21E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	4.50E-01	4.37E-02	6.78E-02	4.37E-02	1.16E-02	1.16E-02
Manganese	2.12E-01	mg/L	0.00E+00	mg/kg	8.30E+02	mg/kg	1.00E+00	2.50E+02	4.20E-01	2.26E-01	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-02	mg/kg	1.00E+00		1.14E+00	7.64E+00	NA	1.41E+00	NA	9.15E-02	9.15E-02
Mercury (methyl)	0.00E+00	mg/L	2.09E-01	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	7.56E-01	NA	7.56E-01		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.88E-04	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01
Nickel	0.00E+00	mg/L	0.00E+00	mg/kg	6.36E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	NA	6.84E-02	NA	8.71E-02	8.71E-02
Nitrate	4.70E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Nitrate/Nitrite	6.18E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E-04	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.62E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-01	mg/kg	1.00E+00			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	7.70E-02	mg/kg	1.00E+00			3.00E-01	NA	3.19E+01	3.19E+01	1.11E-01	1.11E-01
Selenium	3.23E-03	mg/L	1.10E+00	mg/kg	3.74E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.21E+00	5.12E-01	4.59E-01	5.12E-01	1.51E-01	1.51E-01
Silver	0.00E+00	mg/L	2.05E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.30E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Sulfate	1.10E+01	mg/L	4.59E+00	mg/kg	1.30E+02	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Thallium	1.00E-03	mg/L	6.22E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Vanadium	0.00E+00	mg/L	0.00E+00	mg/kg	1.45E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03
Zinc	6.50E-02	mg/L	7.78E+01	mg/kg	4.79E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	6.34E+00	7.15E-01	8.84E-01	7.15E-01	1.84E-01	1.84E-01

Chemical	EED Surface Water (mg/kg-d)	EED Sediment (mg/kg-d)	EED Soil (mg/kg-d)	EED Fish (mg/kg-d)	EED Aq. Invert. (mg/kg-d)	EED Terr. Invert. (mg/kg-d)	EED Aq. Plants (mg/kg-d)	EED Terr. Plants (mg/kg-d)	EED Plant Roots (mg/kg-d)	EED Mammals (mg/kg-d)	EED Birds (mg/kg-d)	Total EED (mg/kg-d)	NOAEL (mg/kg-d)	EEQ N	LOAEL (mg/kg-d)	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	6.80E-10	8.76E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.62E-10	9.04E-11	1.62E-10	0.00E+00	0.00E+00	9.85E-09	1.00E-06	9.85E-03	1.00E-05	9.85E-04	0.03%	0.03%
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	1.76E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.36E-06	1.64E-07	2.36E-06	0.00E+00	0.00E+00	2.25E-05	8.00E-01	2.82E-05	4.00E+00	5.63E-06	0.00%	0.00%
4,4'-DDE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.09E-06	0.00E+00	0.00E+00	0.00E+00	3.09E-06	8.00E-01	3.87E-06	4.00E+00	7.73E-07	0.00%	0.00%
4,4'-DDT	0.00E+00	1.80E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.41E-06	2.19E-07	2.41E-06	0.00E+00	0.00E+00	2.31E-05	8.00E-01	2.88E-05	4.00E+00	5.76E-06	0.00%	0.00%
Aldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.27E-09	0.00E+00	0.00E+00	0.00E+00	6.27E-09	2.00E-01	3.14E-08	1.00E+00	6.27E-09	0.00%	0.00%
alpha-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.16E-08	0.00E+00	0.00E+00	0.00E+00	2.16E-08	4.58E+00	4.71E-09	9.16E+00	2.35E-09	0.00%	0.00%
Aluminum	1.68E-01	6.19E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.44E-01	0.00E+00	4.44E-01	0.00E+00	0.00E+00	6.29E+01	1.93E+00	3.26E+01	1.93E+01	3.26E+00	94.78%	88.23%
Antimony	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.38E-04	0.00E+00	0.00E+00	0.00E+00	1.38E-04	1.25E-01	1.11E-03	1.25E+00	1.11E-04	0.00%	0.00%
Aroclor 1242	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.57E-07	0.00E+00	0.00E+00	0.00E+00	1.57E-07	6.85E-02	2.29E-06	6.85E-01	2.29E-07	0.00%	0.00%
Aroclor 1248	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.43E-08	0.00E+00	0.00E+00	0.00E+00	7.43E-08	6.80E-02	1.09E-06	6.80E-01	1.09E-07	0.00%	0.00%
Aroclor 1254	0.00E+00	2.90E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.96E-06	8.70E-08	4.96E-06	0.00E+00	0.00E+00	3.00E-04	6.80E-02	4.41E-03	6.80E-01	4.41E-04	0.01%	0.01%
Aroclor 1260	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.92E-08	0.00E+00	0.00E+00	0.00E+00	1.92E-08	6.80E-02	2.82E-07	6.80E-01	2.82E-08	0.00%	0.00%
Aroclor 1268	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.06E-06	0.00E+00	0.00E+00	0.00E+00	3.06E-06	6.80E-02	4.50E-05	6.80E-01	4.50E-06	0.00%	0.00%
Barium	0.00E+00	8.14E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.08E-01	0.00E+00	6.08E-01	0.00E+00	0.00E+00	2.03E+00	5.10E+00	3.98E-01	1.98E+01	1.03E-01	1.16%	2.77%
Benzoic Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E-03	0.00E+00	0.00E+00	0.00E+00	1.20E-03	4.00E+00	3.01E-04	4.00E+01	3.01E-05	0.00%	0.00%
bis(2-ethylhexyl)phthalate	1.39E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.39E-03	1.83E+01	7.56E-05	1.83E+02	7.58E-06	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	3.34E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.37E-02	2.35E-03	1.37E-02	0.00E+00	0.00E+00	3.31E-02	1.00E+00	3.31E-02	1.00E+01	3.31E-03	0.10%	0.09%
Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.18E-08	0.00E+00	0.00E+00	0.00E+00	1.18E-08	4.58E+00	2.58E-09	9.16E+00	1.29E-09	0.00%	0.00%
Chromium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.31E-03	0.00E+00	0.00E+00	0.00E+00	3.31E-03	3.28E+00	1.01E-03	1.31E+01	2.52E-04	0.00%	0.01%
cis-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.45E-08	0.00E+00	0.00E+00	0.00E+00	1.45E-08	4.58E+00	3.17E-09	9.16E+00	1.58E-09	0.00%	0.00%
Copper	1.19E-03	7.47E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.63E-01	2.98E-02	1.63E-01	0.00E+00	0.00E+00	4.32E-01	1.17E+01	3.70E-02	1.51E+01	2.86E-02	0.11%	0.77%
Dieldrin	0.00E+00	1.77E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.04E-06	3.03E-08	2.04E-06	0.00E+00	0.00E+00	2.18E-05	2.00E-02	1.09E-03	2.00E-01	1.09E-04	0.00%	0.00%
Endrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.78E-08	0.00E+00	0.00E+00	0.00E+00	4.78E-08	9.20E-02	5.20E-07	9.20E-01	5.20E-08	0.00%	0.00%
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.25E-08	0.00E+00	0.00E+00	0.00E+00	2.25E-08	8.00E-02	2.81E-07	2.90E-01	7.76E-08	0.00%	0.00%
HMX	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	2.60E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.67E-01	0.00E+00	0.00E+00	0.00E+00	5.27E-01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	6.08E-04	4.12E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.62E-02	1.10E-02	8.62E-02	0.00E+00	0.00E+00	5.96E-01	8.00E+00	7.45E-02	8.00E+01	7.45E-03	0.22%	0.20%
Manganese	2.06E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.81E-01	0.00E+00	0.00E+00	0.00E+00	5.01E-01	8.80E+01	5.70E-03	2.84E+02	1.77E-03	0.02%	0.05%
Mercury (inorganic)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	5.58E-04	NA	0.00E+00	0.00E+00	5.58E-04	1.32E+01	4.23E-05	3.96E+01	1.41E-05	0.00%	0.00%
Mercury (methyl)	0.00E+00	1.44E-03	0.00E+00	0.00E+00	0.00E+00	NA	5.21E-03	NA	5.21E-03	0.00E+00	0.00E+00	1.19E-02	3.20E-02	3.71E-01	1.60E-01	7.41E-02	1.08%	2.01%
Mirex	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.27E-09	0.00E+00	0.00E+00	0.00E+00	7.27E-09	7.00E-02	1.04E-07	7.00E-01	1.04E-08	0.00%	0.00%
Nickel	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	3.19E-03	NA	0.00E+00	0.00E+00	3.19E-03	4.00E+01	7.97E-05	8.00E+01	3.99E-05	0.00%	0.00%
Nitrate	4.57E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.57E-02	5.07E+02	9.01E-05	1.13E+03	4.04E-05	0.00%	0.00%
Nitrate/Nitrite	6.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.00E-03	5.07E+02	1.18E-05	1.13E+03	5.31E-06	0.00%	0.00%
Oxychlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.30E-08	0.00E+00	0.00E+00	0.00E+00	3.30E-08	4.58E+00	7.19E-09	9.16E+00	3.60E-09	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-07	0.00E+00	0.00E+00	0.00E+00	1.13E-07	2.40E-01	4.71E-07	2.40E+00	4.71E-08	0.00%	0.00%
Pentachlorophenol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.72E-05	0.00E+00	0.00E+00	0.00E+00	7.72E-05	2.40E-01	3.22E-04	2.40E+00	3.22E-05	0.00%	0.00%
Perchlorate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	1.80E-02	0.00E+00	0.00E+00	0.00E+00	1.80E-02	8.50E+00	2.12E-03	2.55E+01	7.07E-04	0.01%	0.02%
Selenium	3.13E-04	7.60E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.86E-02	1.26E-03	1.86E-02	0.00E+00	0.00E+00	4.64E-02	2.00E-01	2.32E-01	3.30E-01	1.41E-01	0.67%	3.80%
Silver	0.00E+00	1.41E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.47E-04	0.00E+00	9.47E-04	0.00E+00	0.00E+00	1.60E-02	1.90E+01	8.43E-04	5.70E+01	2.81E-04	0.00%	0.01%
Strontium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-02	0.00E+00	0.00E+00	0.00E+00	2.00E-02	2.63E+02	7.61E-05	7.89E+02	2.54E-05	0.00%	0.00%
Sulfate	1.07E+00	3.16E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.18E-02	2.00E-01	3.18E-02	0.00E+00	0.00E+00	1.37E+00	NA	NA	NA	NA	NA	NA
Thallium	9.73E-05	4.29E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.39E-03	7.40E-03	5.93E-01	7.40E-02	5.93E-02	1.72%	1.60%
trans-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.73E-08	0.00E+00	0.00E+00	0.00E+00	1.73E-08	4.58E+00	3.77E-09	9.16E+00	1.89E-09	0.00%	0.00%
Vanadium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.82E-04	0.00E+00	0.00E+00	0.00E+00	3.82E-04	2.10E-01	1.82E-03	2.10E+00	1.82E-04	0.01%	0.00%
Zinc	6.31E-03	5.37E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.84E+00	3.11E-01	1.84E+00	0.00E+00	0.00E+00	4.52E+00	1.60E+02	2.83E-02	3.20E+02	1.41E-02	0.08%	0.38%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	2.1E-08	1.1E-08	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	6.1E-05	1.2E-05	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	4.5E-03	4.5E-04	0.01%	0.01%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	7.6E-05	7.6E-06	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	1.1E-03	1.1E-04	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0.1	unitless
Aquatic plant diet fraction =	0.45	unitless
Plant root diet fraction =	0.45	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0.008093	kg/d
Food ingestion rate =	0.0861	kg/d
Body weight =	1.174	kg
Home range =	0.33112	acres
Water intake rate =	0.114	L/d
Site Area =	246	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-65
Tier 1 COPCs
EEQs and Hazard Indices for the River Otter at LHAAP
Low Impact Sub-Area/Goose Praire Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							-----Unitless									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	8.59E-09	mg/L	1.56E-06	mg/kg	3.95E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	2.35E-10	3.25E-10	0.00E+00	2.11E-05	2.74E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.93E-10	2.11E-05	1.00E-06	2.11E+01	1.00E-05	2.11E+00	22.16%	21.71%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	mg/L	2.97E-03	mg/kg	1.40E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	6.20E-07	0.00E+00	0.00E+00	1.00E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.29E-06	2.91E-06	8.00E-01	3.64E-06	4.00E+00	7.29E-07	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	4.30E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.43E-06	3.43E-06	8.00E-01	4.28E-06	4.00E+00	8.56E-07	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	3.04E-03	mg/kg	2.23E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	6.34E-07	0.00E+00	0.00E+00	4.10E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.97E-06	7.70E-06	8.00E-01	9.62E-06	4.00E+00	1.92E-06	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.87E-04	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.73E-07	1.73E-07	2.00E-01	8.64E-07	1.00E+00	1.73E-07	0.00%	0.00%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.76E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.48E-07	3.48E-07	4.58E+00	7.59E-08	9.16E+00	3.79E-08	0.00%	0.00%
Aluminum	2.10E+00	mg/L	1.03E+04	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	5.73E-02	2.14E+00	0.00E+00	1.30E-01	3.71E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.95E+01	1.93E+00	2.04E+01	1.93E+01	2.04E+00	21.48%	21.04%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	6.37E-01	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.48E-05	8.48E-05	1.25E-01	6.79E-04	1.25E+00	6.79E-05	0.00%	0.00%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.07E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.83E-06	2.83E-06	6.85E-02	4.14E-05	6.85E-01	4.14E-06	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.42E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.31E-06	1.31E-06	6.80E-02	1.93E-05	6.90E-01	1.90E-06	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	5.10E-02	mg/kg	4.11E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	1.06E-05	0.00E+00	0.00E+00	8.95E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.50E-06	9.09E-04	6.80E-02	1.34E-02	6.90E-01	1.32E-03	0.01%	0.01%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	7.47E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E-05	1.15E-05	6.80E-02	1.69E-04	6.90E-01	1.66E-05	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.50E-04	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.85E-07	7.85E-07	6.80E-02	1.15E-05	6.90E-01	1.14E-06	0.00%	0.00%
Barium	0.00E+00	mg/L	1.34E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	2.79E-02	0.00E+00	0.00E+00	4.82E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E-01	5.10E+00	1.00E-01	1.98E+01	2.58E-02	0.11%	0.27%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	6.80E-02	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.28E-05	6.28E-05	4.00E+00	1.57E-05	4.00E+01	1.57E-06	0.00%	0.00%
bis(2-ethylhexyl)phthalate	2.43E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	6.64E-04	0.00E+00	0.00E+00	5.43E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.43E-01	1.83E+01	2.96E-02	1.83E+02	2.97E-03	0.03%	0.03%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	mg/L	5.24E-01	mg/kg	3.84E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.58E+01	8.28E-01	9.52E-01	9.52E-01	9.22E-01	9.22E-01	0.00E+00	1.09E-04	0.00E+00	0.00E+00	3.36E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.84E-04	3.75E-03	1.00E+00	3.75E-03	1.00E+01	3.75E-04	0.00%	0.00%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.88E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.73E-07	1.73E-07	4.58E+00	3.78E-08	9.16E+00	1.89E-08	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.22E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.27E-03	3.27E-03	3.28E+00	9.97E-04	1.31E+01	2.49E-04	0.00%	0.00%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.29E-07	2.29E-07	4.58E+00	4.99E-08	9.16E+00	2.50E-08	0.00%	0.00%
Copper	1.42E-02	mg/L	1.27E+01	mg/kg	7.43E+00	mg/kg	1.00E+00	5.92E+03	5.25E+00	1.32E+00	4.15E-01	5.75E-01	5.75E-01	1.49E-01	1.49E-01	3.87E-04	2.64E-03	0.00E+00	1.21E+00	5.33E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.90E-04	1.27E+00	1.17E+01	1.08E-01	1.51E+01	8.36E-02	0.11%	0.86%
Dieldrin	0.00E+00	mg/L	3.00E-03	mg/kg	1.86E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	6.25E-07	0.00E+00	0.00E+00	1.39E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.71E-07	1.47E-05	2.00E-02	7.36E-04	2.00E-01	7.36E-05	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.75E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E-07	2.68E-07	9.20E-02	2.92E-06	9.20E-01	2.92E-07	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.20E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.04E-07	2.04E-07	8.00E-02	2.54E-06	2.90E-01	7.02E-07	0.00%	0.00%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	3.14E+00	mg/L	0.00E+00	mg/kg	1.00E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	8.59E-02	0.00E+00	0.00E+00	4.53E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.66E-02	4.54E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	7.76E-03	mg/L	7.66E+01	mg/kg	2.51E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	4.39E-01	3.92E-02	6.40E-02	6.40E-02	1.33E-02	1.33E-02	2.12E-04	1.60E-02	0.00E+00	1.68E-01	3.73E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E-04	2.22E-01	8.00E+00	2.77E-02	8.00E+01	2.77E-03	0.03%	0.03%
Manganese	2.73E-01	mg/L	0.00E+00	mg/kg	9.35E+02	mg/kg	1.00E+00	2.00E+03	2.10E+00	2.21E-01	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	7.46E-03	0.00E+00	0.00E+00	7.88E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.18E-03	7.89E+00	8.80E+01	8.97E-02	2.84E+02	2.78E-02	0.09%	0.29%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.95E-02	mg/kg	1.00E+00		2.87E+00	7.16E+00	NA	1.35E+00	1.35E+00	1.03E-01	1.03E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	4.91E-06	4.91E-06	1.00E+00	4.91E-06	3.00E+00	1.64E-06	0.00%	0.00%
Mercury (methyl)	0.00E+00	mg/L	2.65E-01	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	6.78E-01	NA	NA			0.00E+00	5.51E-05	0.00E+00	0.00E+00	6.08E-04	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	6.63E-04	1.50E-02	4.42E-02	2.50E-02	2.65E-02	0.05%	0.27%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.41E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.15E-07	3.15E-07	7.00E-02	4.50E-06	7.00E-01	4.50E-07	0.00%	0.00%
Nickel	0.00E+00	mg/L	0.00E+00	mg/kg	7.10E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	NA	6.65E-02	6.65E-02	1.01E-01	1.01E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	5.76E-04	5.76E-04	4.00E-01	1.44E-05	8.00E+01	7.19E-06	0.00%	0.00%
Nitrate	8.86E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	2.42E-02	0.00E+00	0.00E+00	1.36E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.37E+01	5.07E+02	2.70E-02	1.13E+03	1.21E-02	0.03%	0.12%
Nitrate/Nitrite	8.12E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03								2.22E-03	0.00E+00	0.00E+00	1.25E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E+00	5.07E+02	2.47E-03	1.13E+03	1.11E-03	0.00%	0.01%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.62E-07	1.62E-07	4.58E+00	3.55E-08	9.16E+00	1.77E-08	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	8.83E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.16E-07	8.16E-07	2.40E-01	3.40E-06	2.40E+00	3.40E-07	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	4.23E-01	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.90E-04	3.90E-04	2.40E-01	1.63E-03	2.40E+00	1.63E-04	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.80E-01	mg/kg	1.00E+00			1.14E+00	NA	1.88E+01	1.88E+01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	3.73E-05	3.73E-05	8.50E+00	4.39E-06	2.55E+01	1.46E-06	0.00%	0.00%
Selenium	3.74E-03	mg/L	1.29E+00	mg/kg	4.13E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.18E+00	5.20E-01	4.64E-01	4.64E-01	1.95E-01	1.95E-01	1.02E-04	2.69E-04	0.00E+00	1.11E-02	4.65E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.45E-05	1.61E-02	2.00E-01	8.07E-02	3.30E-01	4.89E-02	0.08%	0.50%
Silver	0.00E+00	mg/L	2.66E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	5.54E-04	0.00E+00	0.00E+00	9.59E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.01E-02	1.90E+01	5.34E-04	5.70E+01	1.78E-04	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E-03	1.90E-03	2.63E+02	7.23E-06	7.89E+02	2.41E-06	0.00%	0.00%
Sulfate	1.42E+01	mg/L	6.05E+00	mg/kg	2.30E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	3.89E-01	1.26E-03	0.00E+00	2.19E+02	1.02E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.06E-02	2.20E+02	NA	NA	NA	NA	NA	NA
Thallium	1.70E-03	mg/L	7.02E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00							4.65E-05	1.46E-04	0.00E+00	3.90E-01	2.53E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.93E-01	7.40E-03	5.31E+01	7.40E-02	5.31E+00	55.76%	54.62%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.04E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.80E-07	2.80E-07	4.58E+00	6.12E-08	9.16E+00	3.06E-08	0.00%	0.00%
Vanadium	0.00E+00	mg/L	0.00E+00	mg/kg	1.53E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.28E-05	7.28E-05	2.10E-01	3.47E-04	2.10E+00	3.47E-05	0.00%	0.00%
Zinc	8.78E-02	mg/L	9.41E+01	mg/kg	5.89E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.53E+00	6.57E-01	8.08E-01	8.08E-01	4.51E-01	4.51E-01	2.40E-03	1.96E-02	0.00E+00	6.33E+00	5.67E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.13E-02	6.94E+00	1.60E+02	4.34E-02	3.20E+02	2.17E-02	0.05%	0.22%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	2.6E-07	1.3E-07	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	1.8E-05	3.5E-06	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.4E-02	1.3E-03	0.01%	0.01%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	3.0E-02	3.0E-03	0.03%	0.03%
Aldrin/Dieldrin/Endrin EEQ:	7.4E-04	7.4E-05	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\,x\,Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text tables.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.9	unitless
Aq. Invert diet fraction =	0.05	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0.05	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0.00494	kg/d
Food ingestion rate =	0.38	kg/d
Body weight =	8	kg
Home range =	729	acres
Water intake rate =	0.648	L/d
Site Area =	246	acres
Area Use Factor (AUF) =	0.337449	unitless
Exposure Duration (ED) =	1	unitless

Table E-66
Tier 2 COPCs
EEQs and Hazard Indices for the River Otter at LHAAP
Low Impact Sub-Area/Goose Praire Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							-----	-----	-----	-----	-----Unitless	-----	-----	-----		mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	7.00E-09	mg/L	1.27E-06	mg/kg	3.18E-06	mg/kg	#######	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	1.41E-10	1.95E-10	0.00E+00	1.72E-06	3.51E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.90E-11	1.72E-06	1.00E-06	1.72E+00	1.00E-05	1.72E-01	11.19%	10.78%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	mg/L	2.56E-03	mg/kg	8.00E-04	mg/kg	#######		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	3.93E-07	0.00E+00	0.00E+00	6.36E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.15E-07	1.44E-06	8.00E-01	1.80E-06	4.00E+00	3.61E-07	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	3.10E-03	mg/kg	#######		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.73E-06	1.73E-06	8.00E-01	2.16E-06	4.00E+00	4.32E-07	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	2.61E-03	mg/kg	1.07E-03	mg/kg	#######		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	4.02E-07	0.00E+00	0.00E+00	2.59E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.60E-07	3.56E-06	8.00E-01	4.45E-06	4.00E+00	8.89E-07	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	#######			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.13E-08	9.13E-08	2.00E-01	4.56E-07	1.00E+00	9.13E-08	0.00%	0.00%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.15E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.63E-07	1.63E-07	4.58E+00	3.57E-08	9.16E+00	1.78E-08	0.00%	0.00%
Aluminum	1.73E+00	mg/L	8.98E+03	mg/kg	0.00E+00	mg/kg	#######	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	3.49E-02	1.38E+00	0.00E+00	7.92E-02	2.39E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.54E+01	1.93E+00	1.32E+01	1.93E+01	1.32E+00	85.38%	82.24%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-01	mg/kg	#######			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.34E-05	3.34E-05	1.25E-01	2.67E-04	1.25E+00	2.67E-05	0.00%	0.00%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.55E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.32E-06	1.32E-06	6.85E-02	1.93E-05	6.85E-01	1.93E-06	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.21E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.26E-07	6.26E-07	6.80E-02	9.21E-06	6.90E-01	9.08E-07	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	4.20E-02	mg/kg	3.32E-03	mg/kg	#######		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	6.46E-06	0.00E+00	0.00E+00	1.16E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.76E-07	1.23E-04	6.80E-02	1.82E-03	6.90E-01	1.79E-04	0.01%	0.01%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	4.07E-03	mg/kg	#######			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E-06	4.02E-06	6.80E-02	5.91E-05	6.90E-01	5.83E-06	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	7.92E-04	mg/kg	#######			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.11E-07	4.11E-07	6.80E-02	6.04E-06	6.90E-01	5.95E-07	0.00%	0.00%
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	0.00E+00	mg/kg	#######	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	1.82E-02	0.00E+00	0.00E+00	3.14E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.32E-01	5.10E+00	6.52E-02	1.98E+01	1.68E-02	0.42%	1.05%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	5.10E-02	mg/kg	#######			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.64E-05	2.64E-05	4.00E+00	6.61E-06	4.00E+01	6.61E-07	0.00%	0.00%
bis(2-ethylhexyl)phthalate	1.43E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	2.88E-04	0.00E+00	0.00E+00	1.09E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E-01	1.83E+01	5.94E-03	1.83E+02	5.95E-04	0.04%	0.04%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	mg/L	4.84E-01	mg/kg	3.02E-01	mg/kg	#######	1.15E+03	6.00E-01	2.87E+01	8.58E-01	1.06E+00	1.06E+00	6.72E-01	6.72E-01	0.00E+00	7.44E-05	0.00E+00	0.00E+00	1.72E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E-04	3.66E-04	1.00E+00	3.66E-04	1.00E+01	3.66E-05	0.00%	0.00%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.97E-08	8.97E-08	4.58E+00	1.96E-08	9.16E+00	9.79E-09	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E+01	mg/kg	#######	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.51E-04	5.51E-04	3.28E+00	1.68E-04	1.31E+01	4.20E-05	0.00%	0.00%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E-07	1.10E-07	4.58E+00	2.40E-08	9.16E+00	1.20E-08	0.00%	0.00%
Copper	1.23E-02	mg/L	1.08E+01	mg/kg	6.53E+00	mg/kg	#######	1.11E+03	1.56E+00	1.45E+00	4.57E-01	6.22E-01	6.22E-01	8.97E-02	8.97E-02	2.47E-04	1.67E-03	0.00E+00	1.45E-01	9.99E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.46E-04	1.57E-01	1.17E+01	1.34E-02	1.51E+01	1.04E-02	0.09%	0.65%
Dieldrin	0.00E+00	mg/L	2.57E-03	mg/kg	1.72E-04	mg/kg	#######		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	3.95E-07	0.00E+00	0.00E+00	8.81E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.91E-08	9.30E-06	2.00E-02	4.65E-04	2.00E-01	4.65E-05	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-04	mg/kg	#######			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.71E-07	1.71E-07	9.20E-02	1.86E-06	9.20E-01	1.86E-07	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.93E-04	mg/kg	#######			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-07	1.00E-07	8.00E-02	1.25E-06	2.90E-01	3.45E-07	0.00%	0.00%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	2.68E+00	mg/L	0.00E+00	mg/kg	9.10E+03	mg/kg	#######	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	5.41E-02	0.00E+00	0.00E+00	7.14E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.46E-03	7.20E+00	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	6.26E-03	mg/L	5.97E+01	mg/kg	2.21E+01	mg/kg	#######	4.48E+02	7.10E-02	4.50E-01	4.37E-02	6.78E-02	6.78E-02	1.16E-02	1.16E-02	1.26E-04	9.18E-03	0.00E+00	2.98E-02	2.51E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E-04	4.18E-02	8.00E+00	5.23E-03	8.00E+01	5.23E-04	0.03%	0.03%
Manganese	2.12E-01	mg/L	0.00E+00	mg/kg	8.30E+02	mg/kg	#######	2.50E+02	4.20E-01	2.26E-01	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	4.28E-03	0.00E+00	0.00E+00	5.64E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.72E-03	5.72E-01	8.80E+01	6.50E-03	2.84E+02	2.01E-03	0.04%	0.13%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-02	mg/kg	#######		1.14E+00	7.64E+00	NA	1.41E+00	1.41E+00	9.15E-02	9.15E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	2.92E-06	2.92E-06	1.00E+00	2.92E-06	3.00E+00	9.74E-07	0.00%	0.00%
Mercury (methyl)	0.00E+00	mg/L	2.09E-01	mg/kg	0.00E+00	mg/kg	#######		1.14E+00	NA	7.56E-01	NA	NA			0.00E+00	3.21E-05	0.00E+00	0.00E+00	1.40E-04	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	1.72E-04	1.50E-02	1.15E-02	2.50E-02	6.89E-03	0.07%	0.43%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.88E-04	mg/kg	#######			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.50E-07	1.50E-07	7.00E-02	2.14E-06	7.00E-01	2.14E-07	0.00%	0.00%
Nickel	0.00E+00	mg/L	0.00E+00	mg/kg	6.36E+00	mg/kg	#######		4.86E-01	1.06E+00	NA	6.84E-02	6.84E-02	8.71E-02	8.71E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	3.27E-04	3.27E-04	4.00E+01	8.18E-06	8.00E+01	4.09E-06	0.00%	0.00%
Nitrate	4.70E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	9.48E-03	0.00E+00	0.00E+00	1.51E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E+00	5.07E+02	2.99E-03	1.13E+03	1.34E-03	0.02%	0.08%
Nitrate/Nitrite	6.18E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	3.01E+02								1.25E-03	0.00E+00	0.00E+00	1.98E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.99E-01	5.07E+02	3.93E-04	1.13E+03	1.76E-04	0.00%	0.01%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E-04	mg/kg	#######			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.84E-08	8.84E-08	4.58E+00	1.93E-08	9.16E+00	9.65E-09	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.62E-04	mg/kg	#######			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.91E-07	2.91E-07	2.40E-01	1.21E-06	2.40E+00	1.21E-07	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-01	mg/kg	#######			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E-04	1.28E-04	2.40E-01	5.35E-04	2.40E+00	5.35E-05	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	7.70E-02	mg/kg	#######			3.00E-01	NA	3.19E+01	3.19E+01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	5.04E-06	5.04E-06	8.50E+00	5.93E-07	2.55E+01	1.98E-07	0.00%	0.00%
Selenium	3.23E-03	mg/L	1.10E+00	mg/kg	3.74E-01	mg/kg	#######	2.05E+02	4.50E+00	1.21E+00	5.12E-01	4.59E-01	4.59E-01	1.51E-01	1.51E-01	6.51E-05	1.69E-04	0.00E+00	7.04E-03	2.93E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.34E-05	1.02E-02	2.00E-01	5.12E-02	3.30E-01	3.10E-02	0.33%	1.94%
Silver	0.00E+00	mg/L	2.05E+00	mg/kg	0.00E+00	mg/kg	#######		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	3.15E-04	0.00E+00	0.00E+00	5.45E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.77E-03	1.90E+01	3.03E-04	5.70E+01	1.01E-04	0.00%	0.01%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.30E+01	mg/kg	#######		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.51E-04	8.51E-04	2.63E+02	3.23E-06	7.89E+02	1.08E-06	0.00%	0.00%
Sulfate	1.10E+01	mg/L	4.59E+00	mg/kg	1.30E+02	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	2.22E-01	7.05E-04	0.00E+00	3.53E+01	1.14E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.51E-03	3.55E+01	NA	NA	NA	NA	NA	NA
Thallium	1.00E-03	mg/L	6.22E-01	mg/kg	0.00E+00	mg/kg	#######	7.50E+01	4.50E+00							2.02E-05	9.56E-05	0.00E+00	8.00E-04	1.66E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.57E-03	7.40E-03	3.47E-01	7.40E-02	3.47E-02	2.26%	2.17%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.31E-07	1.31E-07	4.58E+00	2.86E-08	9.16E+00	1.43E-08	0.00%	0.00%
Vanadium	0.00E+00	mg/L	0.00E+00	mg/kg	1.45E+01	mg/kg	#######	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.69E-05	4.69E-05	2.10E-01	2.24E-04	2.10E+00	2.24E-05	0.00%	0.00%
Zinc	6.50E-02	mg/L	7.78E+01	mg/kg	4.79E+01	mg/kg	#######	2.91E+03	1.94E+00	6.34E+00	7.15E-01	8.84E-01	8.84E-01	1.84E-01	1.84E-01	1.31E-03	1.20E-02	0.00E+00	2.01E+00	8.91E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.22E-03	2.12E+00	1.60E+02	1.33E-02	3.20E+02	6.63E-03	0.09%	0.41%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.3E-07	6.4E-08	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	8.4E-06	1.7E-06	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.9E-03	1.9E-04	0.01%	0.01%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	5.9E-03	6.0E-04	0.04%	0.04%
Aldrin/Dieldrin/Endrin EEQ:	4.7E-04	4.7E-05	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi \, x \, Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.9	unitless
Aq. Invert diet fraction =	0.05	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0.05	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0.00494	kg/d
Food ingestion rate =	0.38	kg/d
Body weight =	8	kg
Home range =	988	acres
Water intake rate =	0.648	L/d
Site Area =	246	acres
Area Use Factor (AUF) =	0.248988	unitless
Exposure Duration (ED) =	1	unitless

Table E-67
Tier 1 COPCs
EEQs and Hazard Indices for the Townsend's Big-Eared Bat at LHAAP
Low Impact Sub-Area/Goose Praire Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
									-----	-----	Unitless	-----	-----	-----	
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00
2,3,7,8-TCDD TEQ	8.59E-09	mg/L	1.56E-06	mg/kg	3.95E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00
4,4'-DDD	0.00E+00	mg/L	2.97E-03	mg/kg	1.40E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	4.30E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01
4,4'-DDT	0.00E+00	mg/L	3.04E-03	mg/kg	2.23E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.87E-04	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.76E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Aluminum	2.10E+00	mg/L	1.03E+04	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	6.37E-01	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.07E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.42E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00
Aroclor 1254	0.00E+00	mg/L	5.10E-02	mg/kg	4.11E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	7.47E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.50E-04	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00
Barium	0.00E+00	mg/L	1.34E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	6.80E-02	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00
bis(2-ethylhexyl)phthalate	2.43E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00
Cadmium	0.00E+00	mg/L	5.24E-01	mg/kg	3.84E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.58E+01	8.28E-01	9.52E-01	9.52E-01	9.22E-01	9.22E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.88E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.22E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Copper	1.42E-02	mg/L	1.27E+01	mg/kg	7.43E+00	mg/kg	1.00E+00	5.92E+03	5.25E+00	1.32E+00	4.15E-01	5.75E-01	5.75E-01	1.49E-01	1.49E-01
Dieldrin	0.00E+00	mg/L	3.00E-03	mg/kg	1.86E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.75E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.20E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00
Iron	3.14E+00	mg/L	0.00E+00	mg/kg	1.00E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01		
Lead	7.76E-03	mg/L	7.66E+01	mg/kg	2.51E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	4.39E-01	3.92E-02	6.40E-02	6.40E-02	1.33E-02	1.33E-02
Manganese	2.73E-01	mg/L	0.00E+00	mg/kg	9.35E+02	mg/kg	1.00E+00	2.00E+03	2.10E+00	2.21E-01	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.95E-02	mg/kg	1.00E+00		2.87E+00	7.16E+00	NA	1.35E+00	1.35E+00	1.03E-01	1.03E-01
Mercury (methyl)	0.00E+00	mg/L	2.65E-01	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	6.78E-01	NA	NA		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.41E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00
Nickel	0.00E+00	mg/L	0.00E+00	mg/kg	7.10E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	NA	6.65E-02	6.65E-02	1.01E-01	1.01E-01
Nitrate	8.86E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Nitrate/Nitrite	8.12E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	8.83E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	4.23E-01	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.80E-01	mg/kg	1.00E+00			1.14E+00	NA	1.88E+01	1.88E+01	1.66E-01	1.66E-01
Selenium	3.74E-03	mg/L	1.29E+00	mg/kg	4.13E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.18E+00	5.20E-01	4.64E-01	4.64E-01	1.95E-01	1.95E-01
Silver	0.00E+00	mg/L	2.66E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Sulfate	1.42E+01	mg/L	0.00E+00	mg/kg	6.05E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Thallium	1.70E-03	mg/L	7.02E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.04E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Vanadium	0.00E+00	mg/L	0.00E+00	mg/kg	1.53E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03
Zinc	8.78E-02	mg/L	9.41E+01	mg/kg	5.89E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.53E+00	6.57E-01	8.08E-01	8.08E-01	4.51E-01	4.51E-01

Chemical	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	1.36E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.34E-09	0.00E+00	0.00E+00	0.00E+00	2.70E-09	1.00E-06	2.70E-03	1.00E-05	2.70E-04	0.38%	0.15%
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.39E-06	0.00E+00	0.00E+00	0.00E+00	8.39E-06	8.00E-01	1.05E-05	4.00E+00	2.10E-06	0.00%	0.00%
4,4'-DDE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-04	0.00E+00	0.00E+00	0.00E+00	2.00E-04	8.00E-01	2.49E-04	4.00E+00	4.99E-05	0.04%	0.03%
4,4'-DDT	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E-05	0.00E+00	0.00E+00	0.00E+00	1.33E-05	8.00E-01	1.67E-05	4.00E+00	3.34E-06	0.00%	0.00%
Aldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.49E-08	0.00E+00	0.00E+00	0.00E+00	9.49E-08	2.00E-01	4.75E-07	1.00E+00	9.49E-08	0.00%	0.00%
alpha-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.14E-06	0.00E+00	0.00E+00	0.00E+00	1.14E-06	4.58E+00	2.48E-07	9.16E+00	1.24E-07	0.00%	0.00%
Aluminum	3.31E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.31E-01	1.93E+00	1.72E-01	1.93E+01	1.72E-02	24.31%	9.31%
Antimony	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.34E-03	0.00E+00	0.00E+00	0.00E+00	3.34E-03	1.25E-01	2.67E-02	1.25E+00	2.67E-03	3.78%	1.45%
Aroclor 1242	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.75E-05	0.00E+00	0.00E+00	0.00E+00	3.75E-05	6.85E-02	5.47E-04	6.85E-01	5.47E-05	0.08%	0.03%
Aroclor 1248	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E-06	0.00E+00	0.00E+00	0.00E+00	1.07E-06	6.80E-02	1.58E-05	6.80E-01	1.58E-06	0.00%	0.00%
Aroclor 1254	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.72E-06	0.00E+00	0.00E+00	0.00E+00	2.72E-06	6.80E-02	4.00E-05	6.80E-01	4.00E-06	0.01%	0.00%
Aroclor 1260	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.54E-06	0.00E+00	0.00E+00	0.00E+00	2.54E-06	6.80E-02	3.74E-05	6.80E-01	3.74E-06	0.01%	0.00%
Aroclor 1268	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.35E-05	0.00E+00	0.00E+00	0.00E+00	3.35E-05	6.80E-02	4.92E-04	6.80E-01	4.92E-05	0.07%	0.03%
Barium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E+00	0.00E+00	1.98E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.64E-02	0.00E+00	0.00E+00	0.00E+00	1.64E-02	4.00E+00	4.09E-03	4.00E+01	4.09E-04	0.58%	0.22%
bis(2-ethylhexyl)phthalate	3.83E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.83E-03	1.83E+01	2.09E-04	1.83E+02	2.09E-05	0.03%	0.01%
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.74E-02	0.00E+00	0.00E+00	0.00E+00	2.74E-02	1.00E+00	2.74E-02	1.00E+01	2.74E-03	3.88%	1.48%
Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.66E-07	0.00E+00	0.00E+00	0.00E+00	5.66E-07	4.58E+00	1.24E-07	9.16E+00	6.18E-08	0.00%	0.00%
Chromium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.40E-01	0.00E+00	0.00E+00	0.00E+00	4.40E-01	3.28E+00	1.34E-01	1.31E+01	3.35E-02	19.00%	18.16%
cis-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.47E-07	0.00E+00	0.00E+00	0.00E+00	7.47E-07	4.58E+00	1.63E-07	9.16E+00	8.16E-08	0.00%	0.00%
Copper	2.24E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.20E-01	0.00E+00	0.00E+00	0.00E+00	3.22E-01	1.17E+01	2.75E-02	1.51E+01	2.13E-02	3.90%	11.54%
Dieldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.28E-05	0.00E+00	0.00E+00	0.00E+00	2.28E-05	2.00E-02	1.14E-03	2.00E-01	1.14E-04	0.16%	0.06%
Endrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.88E-07	0.00E+00	0.00E+00	0.00E+00	7.88E-07	9.20E-02	8.56E-06	9.20E-01	8.56E-07	0.00%	0.00%
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.11E-07	0.00E+00	0.00E+00	0.00E+00	3.11E-07	8.00E-02	3.89E-06	2.90E-01	1.07E-06	0.00%	0.00%
HMX	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	4.96E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.00E+00	0.00E+00	0.00E+00	0.00E+00	3.50E+00	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	1.23E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E-01	0.00E+00	0.00E+00	0.00E+00	1.22E-01	8.00E+00	1.52E-02	8.00E+01	1.52E-03	2.15%	0.82%
Manganese	4.31E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E+00	0.00E+00	0.00E+00	0.00E+00	7.04E+00	8.80E+01	8.01E-02	2.84E+02	2.48E-02	11.34%	13.46%
Mercury (inorganic)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	6.00E-03	0.00E+00	0.00E+00	0.00E+00	6.00E-03	1.32E+01	4.55E-04	3.96E+01	1.52E-04	0.06%	0.08%
Mercury (methyl)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	3.20E-02	0.00E+00	1.60E-01	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.78E-07	0.00E+00	0.00E+00	0.00E+00	8.78E-07	7.00E-02	1.25E-05	7.00E-01	1.25E-06	0.00%	0.00%
Nickel	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	3.54E-02	0.00E+00	0.00E+00	0.00E+00	3.54E-02	4.00E+01	8.84E-04	8.00E+01	4.42E-04	0.13%	0.24%
Nitrate	1.40E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.40E-01	5.07E+02	2.76E-04	1.13E+03	1.24E-04	0.04%	0.07%
Nitrate/Nitrite	1.28E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E-02	5.07E+02	2.53E-05	1.13E+03	1.13E-05	0.00%	0.01%
Oxychlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.47E-07	0.00E+00	0.00E+00	0.00E+00	3.47E-07	4.58E+00	7.57E-08	9.16E+00	3.78E-08	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.21E-06	0.00E+00	0.00E+00	0.00E+00	2.21E-06	2.40E-01	9.22E-06	2.40E+00	9.22E-07	0.00%	0.00%
Pentachlorophenol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.23E-03	0.00E+00	0.00E+00	0.00E+00	2.23E-03	2.40E-01	9.29E-03	2.40E+00	9.29E-04	1.32%	0.50%
Perchlorate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	3.94E-01	0.00E+00	0.00E+00	0.00E+00	3.94E-01	8.50E+00	4.63E-02	2.55E+01	1.54E-02	6.56%	8.37%
Selenium	5.90E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.43E-02	0.00E+00	0.00E+00	0.00E+00	1.49E-02	2.00E-01	7.45E-02	3.30E-01	4.52E-02	10.56%	24.50%
Silver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.74E-01	0.00E+00	0.00E+00	0.00E+00	3.74E-01	2.63E+02	1.42E-03	7.89E+02	4.74E-04	0.20%	0.26%
Sulfate	2.25E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.02E+00	0.00E+00	0.00E+00	0.00E+00	8.27E+00	NA	NA	NA	NA	NA	NA
Thallium	2.68E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E-04	7.40E-03	3.63E-02	7.40E-02	3.63E-03	5.14%	1.97%
trans-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.16E-07	0.00E+00	0.00E+00	0.00E+00	9.16E-07	4.58E+00	2.00E-07	9.16E+00	1.00E-07	0.00%	0.00%
Vanadium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.59E-03	0.00E+00	0.00E+00	0.00E+00	4.59E-03	2.10E-01	2.19E-02	2.10E+00	2.19E-03	3.10%	1.19%
Zinc	1.39E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.56E+00	0.00E+00	0.00E+00	0.00E+00	3.57E+00	1.60E+02	2.23E-02	3.20E+02	1.12E-02	3.17%	6.06%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	8.1E-07	4.1E-07	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	2.8E-04	5.5E-05	0.04%	0.03%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.1E-03	1.1E-04	0.16%	0.06%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	2.1E-04	2.1E-05	0.03%	0.01%
Aldrin/Dieldrin/Endrin EEQ:	1.1E-03	1.1E-04	0.16%	0.06%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text tables.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	1	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.000711	kg/d
Body weight =	0.0095	kg
Home range =	1310	acres
Water intake rate =	0.0015	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-68
Tier 2 COPCs
EEQs and Hazard Indices for the Townsend's Big-Eared Bat at LHAAP
Low Impact Sub-Area/Goose Praire Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							-----Unitless-----									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	7.00E-09	mg/L	1.27E-06	mg/kg	3.18E-06	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	9.05E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.56E-10	0.00E+00	0.00E+00	0.00E+00	1.66E-09	1.00E-06	1.66E-03	1.00E-05	1.66E-04	0.46%	0.17%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	mg/L	2.56E-03	mg/kg	8.00E-04	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.37E-06	0.00E+00	0.00E+00	0.00E+00	1.37E-06	8.00E-01	1.72E-06	4.00E+00	3.43E-07	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	3.10E-03	mg/kg	1.00E+00		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.58E-05	0.00E+00	0.00E+00	0.00E+00	2.58E-05	8.00E-01	3.23E-05	4.00E+00	6.46E-06	0.01%	0.01%
4,4'-DDT	0.00E+00	mg/L	2.61E-03	mg/kg	1.07E-03	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E-06	0.00E+00	0.00E+00	0.00E+00	1.83E-06	8.00E-01	2.29E-06	4.00E+00	4.58E-07	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.24E-08	0.00E+00	0.00E+00	0.00E+00	5.24E-08	2.00E-01	2.62E-07	1.00E+00	5.24E-08	0.00%	0.00%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.15E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-07	0.00E+00	0.00E+00	0.00E+00	1.80E-07	4.58E+00	3.93E-08	9.16E+00	1.97E-08	0.00%	0.00%
Aluminum	1.73E+00	mg/L	8.98E+03	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	2.24E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.24E-01	1.93E+00	1.16E-01	1.93E+01	1.16E-02	31.95%	11.54%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-01	mg/kg	1.00E+00			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E-03	0.00E+00	0.00E+00	0.00E+00	1.15E-03	1.25E-01	9.24E-03	1.25E+00	9.24E-04	2.55%	0.92%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.55E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.31E-06	0.00E+00	0.00E+00	0.00E+00	1.31E-06	6.85E-02	1.91E-05	6.85E-01	1.91E-06	0.01%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.21E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.21E-07	0.00E+00	0.00E+00	0.00E+00	6.21E-07	6.80E-02	9.13E-06	6.80E-01	9.13E-07	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	4.20E-02	mg/kg	3.32E-03	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.27E-07	0.00E+00	0.00E+00	0.00E+00	7.27E-07	6.80E-02	1.07E-05	6.80E-01	1.07E-06	0.00%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	4.07E-03	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.60E-07	0.00E+00	0.00E+00	0.00E+00	1.60E-07	6.80E-02	2.36E-06	6.80E-01	2.36E-07	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	7.92E-04	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.55E-05	0.00E+00	0.00E+00	0.00E+00	2.55E-05	6.80E-02	3.76E-04	6.80E-01	3.76E-05	0.10%	0.04%
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E+00	0.00E+00	1.98E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	5.10E-02	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-02	0.00E+00	0.00E+00	0.00E+00	1.00E-02	4.00E+00	2.51E-03	4.00E+01	2.51E-04	0.69%	0.25%
bis(2-ethylhexyl)phthalate	1.43E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	1.85E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.85E-03	1.83E+01	1.01E-04	1.83E+02	1.01E-05	0.03%	0.01%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	mg/L	4.84E-01	mg/kg	3.02E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	2.87E+01	8.58E-01	1.06E+00	1.06E+00	6.72E-01	6.72E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.96E-02	0.00E+00	0.00E+00	0.00E+00	1.96E-02	1.00E+00	1.96E-02	1.00E+01	1.96E-03	5.42%	1.96%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.89E-08	0.00E+00	0.00E+00	0.00E+00	9.89E-08	4.58E+00	2.16E-08	9.16E+00	1.08E-08	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.77E-02	0.00E+00	0.00E+00	0.00E+00	2.77E-02	3.28E+00	8.44E-03	1.31E+01	2.11E-03	2.33%	2.10%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.21E-07	0.00E+00	0.00E+00	0.00E+00	1.21E-07	4.58E+00	2.65E-08	9.16E+00	1.32E-08	0.00%	0.00%
Copper	1.23E-02	mg/L	1.08E+01	mg/kg	6.53E+00	mg/kg	1.00E+00	1.11E+03	1.56E+00	1.45E+00	4.57E-01	6.22E-01	6.22E-01	8.97E-02	8.97E-02	1.58E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.49E-01	0.00E+00	0.00E+00	0.00E+00	2.50E-01	1.17E+01	2.14E-02	1.51E+01	1.65E-02	5.90%	16.47%
Dieldrin	0.00E+00	mg/L	2.57E-03	mg/kg	1.72E-04	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.53E-07	0.00E+00	0.00E+00	0.00E+00	2.53E-07	2.00E-02	1.26E-05	2.00E-01	1.26E-06	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.99E-07	0.00E+00	0.00E+00	0.00E+00	3.99E-07	9.20E-02	4.34E-06	9.20E-01	4.34E-07	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.93E-04	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.88E-07	0.00E+00	0.00E+00	0.00E+00	1.88E-07	8.00E-02	2.35E-06	2.90E-01	6.48E-07	0.00%	0.00%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	2.68E+00	mg/L	0.00E+00	mg/kg	9.10E+03	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	3.47E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.23E+00	0.00E+00	0.00E+00	0.00E+00	2.58E+00	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	6.26E-03	mg/L	5.97E+01	mg/kg	2.21E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	4.50E-01	4.37E-02	6.78E-02	6.78E-02	1.16E-02	1.16E-02	8.09E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.17E-02	0.00E+00	0.00E+00	0.00E+00	9.25E-02	8.00E+00	1.16E-02	8.00E+01	1.16E-03	3.19%	1.15%
Manganese	2.12E-01	mg/L	0.00E+00	mg/kg	8.30E+02	mg/kg	1.00E+00	2.50E+02	4.20E-01	2.26E-01	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	2.74E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E+00	0.00E+00	0.00E+00	0.00E+00	4.04E+00	8.80E+01	4.59E-02	2.84E+02	1.42E-02	12.67%	14.18%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-02	mg/kg	1.00E+00		1.14E+00	7.64E+00	NA	1.41E+00	1.41E+00	9.15E-02	9.15E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	4.66E-03	0.00E+00	0.00E+00	0.00E+00	4.66E-03	1.32E+01	3.53E-04	3.96E+01	1.18E-04	0.10%	0.12%
Mercury (methyl)	0.00E+00	mg/L	2.09E-01	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	7.56E-01	NA	NA			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	3.20E-02	0.00E+00	1.60E-01	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.88E-04	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.08E-08	0.00E+00	0.00E+00	0.00E+00	6.08E-08	7.00E-02	8.68E-07	7.00E-01	8.68E-08	0.00%	0.00%
Nickel	0.00E+00	mg/L	0.00E+00	mg/kg	6.36E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	NA	6.84E-02	6.84E-02	8.71E-02	8.71E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	2.66E-02	0.00E+00	0.00E+00	0.00E+00	2.66E-02	4.00E+01	6.66E-04	8.00E+01	3.33E-04	0.18%	0.33%
Nitrate	4.70E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	6.08E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.08E-02	5.07E+02	1.20E-04	1.13E+03	5.38E-05	0.03%	0.05%
Nitrate/Nitrite	6.18E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02								7.99E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.99E-03	5.07E+02	1.58E-05	1.13E+03	7.07E-06	0.00%	0.01%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E-04	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.75E-07	0.00E+00	0.00E+00	0.00E+00	2.75E-07	4.58E+00	6.01E-08	9.16E+00	3.01E-08	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.62E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.43E-07	0.00E+00	0.00E+00	0.00E+00	9.43E-07	2.40E-01	3.93E-06	2.40E+00	3.93E-07	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-01	mg/kg	1.00E+00			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.45E-04	0.00E+00	0.00E+00	0.00E+00	6.45E-04	2.40E-01	2.69E-03	2.40E+00	2.69E-04	0.74%	0.27%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	7.70E-02	mg/kg	1.00E+00			3.00E-01	NA	3.19E+01	3.19E+01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	1.51E-01	0.00E+00	0.00E+00	0.00E+00	1.51E-01	8.50E+00	1.77E-02	2.55E+01	5.91E-03	4.89%	5.88%
Selenium	3.23E-03	mg/L	1.10E+00	mg/kg	3.74E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.21E+00	5.12E-01	4.59E-01	4.59E-01	1.51E-01	1.51E-01	4.17E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E-02	0.00E+00	0.00E+00	0.00E+00	1.09E-02	2.00E-01	5.46E-02	3.30E-01	3.31E-02	15.06%	32.97%
Silver	0.00E+00	mg/L	2.05E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.30E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.67E-01	0.00E+00	0.00E+00	0.00E+00	1.67E-01	2.63E+02	6.35E-04	7.89E+02	2.12E-04	0.18%	0.21%
Sulfate	1.10E+01	mg/L	4.59E+00	mg/kg	1.30E+02	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	1.42E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.67E+00	0.00E+00	0.00E+00	0.00E+00	3.10E+00	NA	NA	NA	NA	NA	NA
Thallium	1.00E-03	mg/L	6.22E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00							1.30E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E-04	7.40E-03	1.75E-02	7.40E-02	1.75E-03	4.83%	1.74%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.44E-07	0.00E+00	0.00E+00	0.00E+00	1.44E-07	4.58E+00	3.15E-08	9.16E+00	1.58E-08	0.00%	0.00%
Vanadium	0.00E+00	mg/L	0.00E+00	mg/kg	1.45E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.19E-03	0.00E+00	0.00E+00	0.00E+00	3.19E-03	2.10E-01	1.52E-02	2.10E+00	1.52E-03	4.19%	1.51%
Zinc	6.50E-02	mg/L	7.78E+01	mg/kg	4.79E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	6.34E+00	7.15E-01	8.84E-01	8.84E-01	1.84E-01	1.84E-01	8.40E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.60E+00	0.00E+00	0.00E+00	0.00E+00	2.61E+00	1.60E+02	1.63E-02	3.20E+02	8.14E-03	4.49%	8.11%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.8E-07	8.9E-08	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	3.6E-05	7.3E-06	0.01%	0.01%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	4.2E-04	4.2E-05	0.11%	0.04%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	1.0E-04	1.0E-05	0.03%	0.01%
Aldrin/Dieldrin/Endrin EEQ:	1.7E-05	1.8E-06	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\,x\,Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	1	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.000711	kg/d
Body weight =	0.0095	kg
Home range =	3930	acres
Water intake rate =	0.0015	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	0.8185751	unitless
Exposure Duration (ED) =	1	unitless

Table E-69
Tier 1 COPCs
EEQs and Hazard Indices for the Snapping Turtle at LHAAP
Low Impact Sub-Area/Goose Praire Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
							---Unitless---								
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00
2,3,7,8-TCDD TEQ	8.59E-09	mg/L	1.56E-06	mg/kg	3.95E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00
4,4'-DDD	0.00E+00	mg/L	2.97E-03	mg/kg	1.40E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	4.30E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01
4,4'-DDT	0.00E+00	mg/L	3.04E-03	mg/kg	2.23E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.87E-04	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.76E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Aluminum	2.10E+00	mg/L	1.03E+04	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	6.37E-01	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.07E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.42E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00
Aroclor 1254	0.00E+00	mg/L	5.10E-02	mg/kg	4.11E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	7.47E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.50E-04	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00
Barium	0.00E+00	mg/L	1.34E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	6.80E-02	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00
bis(2-ethylhexyl)phthalate	2.43E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00
Cadmium	0.00E+00	mg/L	5.24E-01	mg/kg	3.84E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.58E+01	8.28E-01	9.52E-01	8.28E-01	9.22E-01	9.22E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.88E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.22E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Copper	1.42E-02	mg/L	1.27E+01	mg/kg	7.43E+00	mg/kg	1.00E+00	5.92E+03	5.25E+00	1.32E+00	4.15E-01	5.75E-01	4.15E-01	1.49E-01	1.49E-01
Dieldrin	0.00E+00	mg/L	3.00E-03	mg/kg	1.86E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.75E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.20E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00
Iron	3.14E+00	mg/L	0.00E+00	mg/kg	1.00E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01		
Lead	7.76E-03	mg/L	7.66E+01	mg/kg	2.51E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	4.39E-01	3.92E-02	6.40E-02	3.92E-02	1.33E-02	1.33E-02
Manganese	2.73E-01	mg/L	0.00E+00	mg/kg	9.35E+02	mg/kg	1.00E+00	2.00E+03	2.10E+00	2.21E-01	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.95E-02	mg/kg	1.00E+00		2.87E+00	7.16E+00	NA	1.35E+00	NA	1.03E-01	1.03E-01
Mercury (methyl)	0.00E+00	mg/L	2.65E-01	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	6.78E-01	NA	6.78E-01		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.41E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00
Nickel	0.00E+00	mg/L	0.00E+00	mg/kg	7.10E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	NA	6.65E-02	NA	1.01E-01	1.01E-01
Nitrate	8.86E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Nitrate/Nitrite	8.12E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	8.83E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	4.23E-01	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.80E-01	mg/kg	1.00E+00			1.14E+00	NA	1.88E+01	1.88E+01	1.66E-01	1.66E-01
Selenium	3.74E-03	mg/L	1.29E+00	mg/kg	4.13E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.18E+00	5.20E-01	4.64E-01	5.20E-01	1.95E-01	1.95E-01
Silver	0.00E+00	mg/L	2.66E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Sulfate	1.42E+01	mg/L	6.05E+00	mg/kg	2.30E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Thallium	1.70E-03	mg/L	7.02E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.04E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Vanadium	0.00E+00	mg/L	0.00E+00	mg/kg	1.53E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03
Zinc	8.78E-02	mg/L	9.41E+01	mg/kg	5.89E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.53E+00	6.57E-01	8.08E-01	6.57E-01	4.51E-01	4.51E-01

Chemical	EED Surface Water (mg/kg-d)	EED Sediment (mg/kg-d)	EED Soil (mg/kg-d)	EED Fish (mg/kg-d)	EED Aq. Invert. (mg/kg-d)	EED Terr. Invert. (mg/kg-d)	EED Aq. Plants (mg/kg-d)	EED Terr. Plants (mg/kg-d)	EED Plant Roots (mg/kg-d)	EED Mammals (mg/kg-d)	EED Birds (mg/kg-d)	Total EED (mg/kg-d)	NOAEL (mg/kg-d)	EEQ N	LOAEL (mg/kg-d)	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDD TEQ	1.72E-10	2.48E-10	0.00E+00	2.55E-06	5.43E-09	0.00E+00	7.89E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.56E-06	NA	NA	NA	NA	NA	NA
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	4.72E-07	0.00E+00	0.00E+00	1.99E-07	0.00E+00	2.65E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.35E-07	NA	NA	NA	NA	NA	NA
4,4'-DDE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDT	0.00E+00	4.83E-07	0.00E+00	0.00E+00	8.12E-07	0.00E+00	2.71E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.57E-06	NA	NA	NA	NA	NA	NA
Aldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aluminum	4.19E-02	1.63E+00	0.00E+00	1.58E-02	7.36E+00	0.00E+00	2.63E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.08E+00	NA	NA	NA	NA	NA	NA
Antimony	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1248	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1254	0.00E+00	8.10E-06	0.00E+00	0.00E+00	1.77E-04	0.00E+00	5.02E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.86E-04	NA	NA	NA	NA	NA	NA
Aroclor 1260	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1268	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Barium	0.00E+00	2.12E-02	0.00E+00	0.00E+00	9.57E-02	0.00E+00	1.37E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.54E-01	NA	NA	NA	NA	NA	NA
Benzoic Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	4.85E-04	0.00E+00	0.00E+00	6.58E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.63E-02	NA	NA	NA	NA	NA	NA
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	0.00E+00	8.32E-05	0.00E+00	0.00E+00	6.66E-04	0.00E+00	4.83E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.23E-03	NA	NA	NA	NA	NA	NA
Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Chromium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
cis-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Copper	2.83E-04	2.01E-03	0.00E+00	1.47E-01	1.06E-02	0.00E+00	5.85E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.65E-01	NA	NA	NA	NA	NA	NA
Dieldrin	0.00E+00	4.76E-07	0.00E+00	0.00E+00	2.76E-06	0.00E+00	5.47E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.71E-06	NA	NA	NA	NA	NA	NA
Endrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Iron	6.29E-02	0.00E+00	0.00E+00	5.49E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.56E+00	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	1.55E-04	1.22E-02	0.00E+00	2.04E-02	7.39E-03	0.00E+00	3.34E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.34E-02	NA	NA	NA	NA	NA	NA
Manganese	5.46E-03	0.00E+00	0.00E+00	9.54E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.60E-01	NA	NA	NA	NA	NA	NA
Mercury (inorganic)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Mercury (methyl)	0.00E+00	4.20E-05	0.00E+00	0.00E+00	1.21E-04	NA	2.00E-04	NA	0.00E+00	0.00E+00	0.00E+00	3.62E-04	NA	NA	NA	NA	NA	NA
Mirex	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Nitrate	1.77E-02	0.00E+00	0.00E+00	1.65E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.67E+00	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	1.62E-03	0.00E+00	0.00E+00	1.52E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.53E-01	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
p-Isopropyltoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Pentachloroanisole	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Pentachlorophenol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Perchlorate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Selenium	7.48E-05	2.05E-04	0.00E+00	1.34E-03	9.23E-04	0.00E+00	7.46E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.29E-03	NA	NA	NA	NA	NA	NA
Silver	0.00E+00	4.22E-04	0.00E+00	0.00E+00	1.90E-03	0.00E+00	5.03E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.83E-03	NA	NA	NA	NA	NA	NA
Strontium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Sulfate	2.85E-01	9.61E-04	0.00E+00	2.66E+01	2.02E-03	0.00E+00	2.36E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.69E+01	NA	NA	NA	NA	NA	NA
Thallium	3.40E-05	1.11E-04	0.00E+00	4.73E-02	5.02E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.79E-02	NA	NA	NA	NA	NA	NA
trans-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Vanadium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Zinc	1.76E-03	1.49E-02	0.00E+00	7.67E-01	1.13E-01	0.00E+00	6.88E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.65E-01	NA	NA	NA	NA	NA	NA

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	0.0E+00	0.0E+00	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	0.0E+00	0.0E+00	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0.35	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.55	unitless
Aq. Invert diet fraction =	0.05	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0.000889	kg/d
Food ingestion rate =	0.0178	kg/d
Body weight =	5.6	kg
Home range =	0.593051	acres
Water intake rate =	0.112	L/d
Site Area =	246	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-70
Tier 2 COPCs
EEQs and Hazard Indices for the Snapping Turtle at LHAAP
Low Impact Sub-Area/Goose Praire Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
									------------	------------	------Unitless	------------	------------	------------	
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01
2,3,7,8-TCDD TEQ	7.00E-09	mg/L	1.27E-06	mg/kg	3.18E-06	mg/kg	#######	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01
4,4'-DDD	0.00E+00	mg/L	2.56E-03	mg/kg	8.00E-04	mg/kg	#######		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	3.10E-03	mg/kg	#######		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01
4,4'-DDT	0.00E+00	mg/L	2.61E-03	mg/kg	1.07E-03	mg/kg	#######		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	#######			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.15E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Aluminum	1.73E+00	mg/L	8.98E+03	mg/kg	0.00E+00	mg/kg	#######	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-01	mg/kg	#######			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.55E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.21E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01
Aroclor 1254	0.00E+00	mg/L	4.20E-02	mg/kg	3.32E-03	mg/kg	#######		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	4.07E-03	mg/kg	#######			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	7.92E-04	mg/kg	#######			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	0.00E+00	mg/kg	#######	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	5.10E-02	mg/kg	#######			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01
bis(2-ethylhexyl)phthalate	1.43E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01
Cadmium	0.00E+00	mg/L	4.84E-01	mg/kg	3.02E-01	mg/kg	#######	1.15E+03	6.00E-01	2.87E+01	8.58E-01	1.06E+00	8.58E-01	6.72E-01	6.72E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E+01	mg/kg	#######	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Copper	1.23E-02	mg/L	1.08E+01	mg/kg	6.53E+00	mg/kg	#######	1.11E+03	1.56E+00	1.45E+00	4.57E-01	6.22E-01	4.57E-01	8.97E-02	8.97E-02
Dieldrin	0.00E+00	mg/L	2.57E-03	mg/kg	1.72E-04	mg/kg	#######		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-04	mg/kg	#######			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.93E-04	mg/kg	#######			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01
Iron	2.68E+00	mg/L	0.00E+00	mg/kg	9.10E+03	mg/kg	#######	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.67E+00		1.39E+01	1.39E+01	1.39E+01		
Lead	6.26E-03	mg/L	5.97E+01	mg/kg	2.21E+01	mg/kg	#######	4.48E+02	7.10E-02	4.50E-01	4.37E-02	6.78E-02	4.37E-02	1.16E-02	1.16E-02
Manganese	2.12E-01	mg/L	0.00E+00	mg/kg	8.30E+02	mg/kg	#######	2.50E+02	4.20E-01	2.26E-01	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-02	mg/kg	#######		1.14E+00	7.64E+00	NA	1.41E+00	NA	9.15E-02	9.15E-02
Mercury (methyl)	0.00E+00	mg/L	2.09E-01	mg/kg	0.00E+00	mg/kg	#######		1.14E+00	NA	7.56E-01	NA	7.56E-01		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.88E-04	mg/kg	#######			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01
Nickel	0.00E+00	mg/L	0.00E+00	mg/kg	6.36E+00	mg/kg	#######		4.86E-01	1.06E+00	NA	6.84E-02	NA	8.71E-02	8.71E-02
Nitrate	4.70E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Nitrate/Nitrite	6.18E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	3.01E+02							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E-04	mg/kg	#######			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.62E-04	mg/kg	#######			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-01	mg/kg	#######			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	7.70E-02	mg/kg	#######			3.00E-01	NA	3.19E+01	3.19E+01	1.11E-01	1.11E-01
Selenium	3.23E-03	mg/L	1.10E+00	mg/kg	3.74E-01	mg/kg	#######	2.05E+02	4.50E+00	1.21E+00	5.12E-01	4.59E-01	5.12E-01	1.51E-01	1.51E-01
Silver	0.00E+00	mg/L	2.05E+00	mg/kg	0.00E+00	mg/kg	#######		4.50E+00		1.40E-02	1.40E-02	1.40E-02		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.30E+01	mg/kg	#######		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Sulfate	1.10E+01	mg/L	4.59E+00	mg/kg	1.30E+02	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Thallium	1.00E-03	mg/L	6.22E-01	mg/kg	0.00E+00	mg/kg	#######	7.50E+01	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Vanadium	0.00E+00	mg/L	0.00E+00	mg/kg	1.45E+01	mg/kg	#######	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03
Zinc	6.50E-02	mg/L	7.78E+01	mg/kg	4.79E+01	mg/kg	#######	2.91E+03	1.94E+00	6.34E+00	7.15E-01	8.84E-01	7.15E-01	1.84E-01	1.84E-01

Chemical	EED Surface Water (mg/kg-d)	EED Sediment (mg/kg-d)	EED Soil (mg/kg-d)	EED Fish (mg/kg-d)	EED Aq. Invert. (mg/kg-d)	EED Terr. Invert. (mg/kg-d)	EED Aq. Plants (mg/kg-d)	EED Terr. Plants (mg/kg-d)	EED Plant Roots (mg/kg-d)	EED Mammals (mg/kg-d)	EED Birds (mg/kg-d)	Total EED (mg/kg-d)	NOAEL (mg/kg-d)	EEQ N	LOAEL (mg/kg-d)	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDD TEQ	1.40E-10	2.02E-10	0.00E+00	2.82E-07	9.43E-10	0.00E+00	5.47E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.84E-07	NA	NA	NA	NA	NA	NA
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	4.06E-07	0.00E+00	0.00E+00	1.71E-07	0.00E+00	7.97E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.57E-07	NA	NA	NA	NA	NA	NA
4,4'-DDE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDT	0.00E+00	4.15E-07	0.00E+00	0.00E+00	6.97E-07	0.00E+00	8.14E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.19E-06	NA	NA	NA	NA	NA	NA
Aldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aluminum	3.46E-02	1.43E+00	0.00E+00	1.30E-02	6.42E+00	0.00E+00	1.50E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.91E+00	NA	NA	NA	NA	NA	NA
Antimony	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1248	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1254	0.00E+00	6.67E-06	0.00E+00	0.00E+00	3.12E-05	0.00E+00	1.67E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.80E-05	NA	NA	NA	NA	NA	NA
Aroclor 1260	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1268	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Barium	0.00E+00	1.87E-02	0.00E+00	0.00E+00	8.44E-02	0.00E+00	2.05E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.24E-01	NA	NA	NA	NA	NA	NA
Benzoic Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	2.86E-04	0.00E+00	0.00E+00	1.78E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.81E-02	NA	NA	NA	NA	NA	NA
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	0.00E+00	7.68E-05	0.00E+00	0.00E+00	4.61E-05	0.00E+00	4.62E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.85E-04	NA	NA	NA	NA	NA	NA
Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Chromium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
cis-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Copper	2.45E-04	1.72E-03	0.00E+00	2.38E-02	2.69E-03	0.00E+00	5.51E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.40E-02	NA	NA	NA	NA	NA	NA
Dieldrin	0.00E+00	4.08E-07	0.00E+00	0.00E+00	2.37E-06	0.00E+00	6.86E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.85E-06	NA	NA	NA	NA	NA	NA
Endrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Iron	5.37E-02	0.00E+00	0.00E+00	1.17E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.23E+00	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	1.25E-04	9.48E-03	0.00E+00	4.90E-03	6.74E-04	0.00E+00	2.91E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.81E-02	NA	NA	NA	NA	NA	NA
Manganese	4.24E-03	0.00E+00	0.00E+00	9.27E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.69E-02	NA	NA	NA	NA	NA	NA
Mercury (inorganic)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Mercury (methyl)	0.00E+00	3.31E-05	0.00E+00	0.00E+00	3.77E-05	NA	1.76E-04	NA	0.00E+00	0.00E+00	0.00E+00	2.46E-04	NA	NA	NA	NA	NA	NA
Mirex	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Nitrate	9.41E-03	0.00E+00	0.00E+00	2.47E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.57E-01	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	1.24E-03	0.00E+00	0.00E+00	3.25E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.38E-02	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
p-Isopropyltoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Pentachloroanisole	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Pentachlorophenol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Perchlorate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Selenium	6.45E-05	1.75E-04	0.00E+00	1.16E-03	7.88E-04	0.00E+00	6.27E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.81E-03	NA	NA	NA	NA	NA	NA
Silver	0.00E+00	3.25E-04	0.00E+00	0.00E+00	1.47E-03	0.00E+00	3.19E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.82E-03	NA	NA	NA	NA	NA	NA
Strontium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Sulfate	2.20E-01	7.28E-04	0.00E+00	5.79E+00	3.06E-04	0.00E+00	1.07E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.02E+00	NA	NA	NA	NA	NA	NA
Thallium	2.00E-05	9.88E-05	0.00E+00	1.31E-04	4.45E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.95E-04	NA	NA	NA	NA	NA	NA
trans-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Vanadium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Zinc	1.30E-03	1.24E-02	0.00E+00	3.31E-01	2.39E-02	0.00E+00	6.19E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.30E-01	NA	NA	NA	NA	NA	NA

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	0.0E+00	0.0E+00	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	0.0E+00	0.0E+00	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0.35	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.55	unitless
Aq. Invert diet fraction =	0.05	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0.000889	kg/d
Food ingestion rate =	0.0178	kg/d
Body weight =	5.6	kg
Home range =	11.21854	acres
Water intake rate =	0.112	L/d
Site Area =	246	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-71
Tier 1 COPCs
EEQs and Hazard Indices for the Bank Swallow at LHAAP
Low Impact Sub-Area/Goose Praire Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							---Unitless---									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.22E-01	0.00E+00	1.27E+00	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	8.59E-09	mg/L	1.56E-06	mg/kg	3.95E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	2.06E-09	3.67E-09	0.00E+00	0.00E+00	1.45E-06	4.15E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.87E-06	1.40E-05	1.34E-01	1.40E-04	1.34E-02	0.44%	0.17%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	mg/L	2.97E-03	mg/kg	1.40E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	7.00E-06	0.00E+00	0.00E+00	5.31E-05	1.03E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.63E-04	2.80E-03	5.82E-02	2.80E-02	5.82E-03	0.19%	0.07%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	4.30E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.17E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.17E-04	5.80E-02	5.47E-03	5.80E-01	5.47E-04	0.02%	0.01%
4,4'-DDT	0.00E+00	mg/L	3.04E-03	mg/kg	2.23E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	7.16E-06	0.00E+00	0.00E+00	2.17E-04	1.70E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.94E-04	2.80E-03	1.41E-01	2.80E-02	1.41E-02	0.46%	0.18%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.87E-04	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-05	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.76E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.80E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.80E-05	2.14E+00	1.31E-05	1.07E+01	2.62E-06	0.00%	0.00%
Aluminum	2.10E+00	mg/L	1.03E+04	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	5.03E-01	2.42E+01	0.00E+00	0.00E+00	1.97E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.99E+03	1.10E+02	1.82E+01	3.29E+02	6.06E+00	59.84%	75.88%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	6.37E-01	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.43E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.43E-03	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.07E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.29E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.29E-04	4.10E-01	5.59E-04	1.23E+00	1.86E-04	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.42E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.06E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.06E-04	1.80E-01	5.89E-04	1.80E+00	5.89E-05	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	5.10E-02	mg/kg	4.11E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	1.20E-04	0.00E+00	0.00E+00	4.75E-02	3.15E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.79E-02	1.80E-01	2.66E-01	1.80E+00	2.66E-02	0.88%	0.33%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	7.47E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.02E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.02E-04	1.80E-01	3.34E-03	1.80E+00	3.34E-04	0.01%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.50E-04	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.63E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.63E-05	1.80E-01	3.13E-04	1.80E+00	3.13E-05	0.00%	0.00%
Barium	0.00E+00	mg/L	1.34E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	3.15E-01	0.00E+00	0.00E+00	2.56E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.59E+01	2.08E+01	1.25E+00	4.17E+01	6.22E-01	4.10%	7.78%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	6.80E-02	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.26E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.26E-03	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	2.43E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	5.82E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.82E-03	1.11E+00	5.24E-03	3.33E+00	1.75E-03	0.02%	0.02%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	0.00E+00	mg/L	5.24E-01	mg/kg	3.84E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.58E+01	8.28E-01	9.52E-01	9.52E-01	9.22E-01	9.22E-01	0.00E+00	1.23E-03	0.00E+00	0.00E+00	1.78E-01	4.68E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.26E-01	1.45E+00	1.56E-01	2.00E+01	1.13E-02	0.51%	0.14%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.88E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.40E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.40E-05	2.14E+00	6.53E-06	1.07E+01	1.31E-06	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.22E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E-01	1.00E+00	1.83E-01	5.00E+00	3.66E-02	0.60%	0.46%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.84E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.84E-05	2.14E+00	8.62E-06	1.07E+01	1.72E-06	0.00%	0.00%
Copper	1.42E-02	mg/L	1.27E+01	mg/kg	7.43E+00	mg/kg	1.00E+00	5.92E+03	5.25E+00	1.32E+00	4.15E-01	5.75E-01	5.75E-01	1.49E-01	1.49E-01	3.40E-03	2.98E-02	0.00E+00	0.00E+00	2.83E+00	4.63E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.91E+00	4.70E+01	6.18E-02	6.17E+01	4.71E-02	0.20%	0.59%
Dieldrin	0.00E+00	mg/L	3.00E-03	mg/kg	1.86E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	7.05E-06	0.00E+00	0.00E+00	7.39E-04	1.34E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.60E-04	7.70E-02	9.87E-03	2.31E-01	3.29E-03	0.03%	0.04%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.75E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.99E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.99E-05	3.00E-01	6.62E-05	9.00E-01	2.21E-05	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.20E-01	0.00E+00	2.76E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.20E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.62E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.62E-05	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Iron	3.14E+00	mg/L	0.00E+00	mg/kg	1.00E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	7.53E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.70E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.45E+00	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	7.76E-03	mg/L	7.66E+01	mg/kg	2.51E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	4.39E-01	3.92E-02	6.40E-02	6.40E-02	1.33E-02	1.33E-02	1.86E-03	1.80E-01	0.00E+00	0.00E+00	1.98E+00	5.22E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.21E+00	1.13E+00	1.96E+00	1.13E+01	1.96E-01	6.44%	2.45%
Manganese	2.73E-01	mg/L	0.00E+00	mg/kg	9.35E+02	mg/kg	1.00E+00	2.00E+03	2.10E+00	2.21E-01	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	6.54E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.77E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.04E+00	9.77E+02	1.07E-03	9.77E+03	1.07E-04	0.00%	0.00%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.95E-02	mg/kg	1.00E+00		2.87E+00	7.16E+00	NA	1.35E+00	1.35E+00	1.03E-01	1.03E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.01E-03	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.01E-03	4.50E-01	4.48E-03	9.00E-01	2.24E-03	0.01%	0.03%
Mercury (methyl)	0.00E+00	mg/L	2.65E-01	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	6.78E-01	NA	NA			0.00E+00	6.23E-04	0.00E+00	0.00E+00	3.23E-02	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	3.29E-02	6.40E-03	5.14E+00	6.40E-02	5.14E-01	16.91%	6.44%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.41E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.62E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.62E-05	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	mg/L	0.00E+00	mg/kg	7.10E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	NA	6.65E-02	6.65E-02	1.01E-01	1.01E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E-01	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E-01	7.74E+01	2.05E-03	1.07E+02	1.48E-03	0.01%	0.02%
Nitrate	8.86E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	2.12E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.12E-01	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	8.12E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03								1.95E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.95E-02	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E-05	2.14E+00	5.94E-06	1.07E+01	1.19E-06	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+02	0.00E+00	3.20E+02	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	8.83E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.34E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.34E-05	6.73E+00	9.41E-06	6.73E+01	9.41E-07	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	4.23E-01	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.97E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.97E-02	6.73E+00	4.41E-03	6.73E+01	4.41E-04	0.01%	0.01%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.80E-01	mg/kg	1.00E+00			1.14E+00	NA	1.88E+01	1.88E+01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.51E-03	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.51E-03	6.50E+01	2.32E-05	1.30E+02	1.16E-05	0.00%	0.00%
Selenium	3.74E-03	mg/L	1.29E+00	mg/kg	4.13E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.18E+00	5.20E-01	4.64E-01	4.64E-01	1.95E-01	1.95E-01	8.96E-04	3.04E-03	0.00E+00	0.00E+00	2.47E-01	2.30E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.53E-01	1.80E+00	1.41E-01	5.40E+00	4.69E-02	0.46%	0.59%
Silver	0.00E+00	mg/L	2.66E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	6.26E-03	0.00E+00	0.00E+00	5.09E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.15E-01	5.44E+00	9.47E-02	5.44E+01	9.47E-03	0.31%	0.12%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.87E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.87E-02	NA	NA	NA	NA	NA	NA
Sulfate	1.42E+01	mg/L	6.05E+00	mg/kg	2.30E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	3.41E+00	1.42E-02	0.00E+00	0.00E+00	5.41E-01	1.24E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.21E+00	NA	NA	NA	NA	NA	NA
Thallium	1.70E-03	mg/L	7.02E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00							4.08E-04	1.65E-03	0.00E+00	0.00E+00	1.34E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E-01	3.50E-01	3.90E-01	1.05E+00	1.30E-01	1.28%	1.63%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.04E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.26E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.26E-05	2.14E+00	1.06E-05	1.07E+01	2.11E-06	0.00%	0.00%
Vanadium	0.00E+00	mg/L	0.00E+00	mg/kg	1.53E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.38E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.38E-03	1.14E+01	5.60E-04	3.42E+01	1.87E-04	0.00%	0.00%
Zinc	8.78E-02	mg/L	9.41E+01	mg/kg	5.89E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.53E+00	6.57E-01	8.08E-01	8.08E-01	4.51E-01	4.51E-01	2.10E-02	2.21E-01	0.00E+00	0.00E+00	3.01E+01	1.54E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.19E+01	1.45E+01	2.20E+00	1.31E+02	2.43E-01	7.24%	3.05%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	4.5E-05	8.9E-06	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	2.0E-01	2.0E-02	0.67%	0.26%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	2.7E-01	2.7E-02	0.89%	0.34%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	5.2E-03	1.7E-03	0.02%	0.02%
Aldrin/Dieldrin/Endrin EEQ:	9.9E-03	3.3E-03	0.03%	0.04%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\, x\, Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0.9	unitless
Terr. Invert diet fraction =	0.1	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	3.44E-05	kg/d
Food ingestion rate =	0.00069	kg/d
Body weight =	0.0146	kg
Home range =	49.4	acres
Water intake rate =	0.0035	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-72
Tier 2 COPCs
EEQs and Hazard Indices for the Bank Swallow at LHAAP
Low Impact Sub-Area/Goose Praire Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							-----	-----	-----	-----	Unitless	-----	-----	-----		mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	EEQ N	mg/kg-d	EEQ L	EEQ N	EEQ L
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.22E-01	0.00E+00	1.27E+00	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	7.00E-09	mg/L	1.27E-06	mg/kg	3.18E-06	mg/kg	#######	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	1.68E-09	2.99E-09	0.00E+00	0.00E+00	2.52E-07	1.66E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.23E-07	1.40E-05	3.02E-02	1.40E-04	3.02E-03	0.15%	0.05%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	mg/L	2.56E-03	mg/kg	8.00E-04	mg/kg	#######		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	6.02E-06	0.00E+00	0.00E+00	4.57E-05	3.39E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.56E-05	2.80E-03	3.06E-02	2.80E-02	3.06E-03	0.15%	0.05%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	3.10E-03	mg/kg	#######		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.32E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.32E-04	5.80E-02	2.27E-03	5.80E-01	2.27E-04	0.01%	0.00%
4,4'-DDT	0.00E+00	mg/L	2.61E-03	mg/kg	1.07E-03	mg/kg	#######		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	6.15E-06	0.00E+00	0.00E+00	1.87E-04	4.68E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-04	2.80E-03	8.56E-02	2.80E-02	8.56E-03	0.42%	0.14%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	#######			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.71E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.71E-06	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.15E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.35E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.35E-05	2.14E+00	6.33E-06	1.07E+01	1.27E-06	0.00%	0.00%
Aluminum	1.73E+00	mg/L	8.98E+03	mg/kg	0.00E+00	mg/kg	#######	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	4.15E-01	2.11E+01	0.00E+00	0.00E+00	1.72E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E+03	1.10E+02	1.59E+01	3.29E+02	5.29E+00	78.05%	83.88%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-01	mg/kg	#######			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.22E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.22E-04	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.55E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E-04	4.10E-01	2.68E-04	1.23E+00	8.94E-05	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.21E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.21E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.21E-05	1.80E-01	2.89E-04	1.80E+00	2.89E-05	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	4.20E-02	mg/kg	3.32E-03	mg/kg	#######		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	9.89E-05	0.00E+00	0.00E+00	8.34E-03	1.47E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.59E-03	1.80E-01	4.77E-02	1.80E+00	4.77E-03	0.23%	0.08%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	4.07E-03	mg/kg	#######			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.89E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.89E-04	1.80E-01	1.05E-03	1.80E+00	1.05E-04	0.01%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	7.92E-04	mg/kg	#######			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.02E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.02E-05	1.80E-01	1.68E-04	1.80E+00	1.68E-05	0.00%	0.00%
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	0.00E+00	mg/kg	#######	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	2.78E-01	0.00E+00	0.00E+00	2.26E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.29E+01	2.08E+01	1.10E+00	4.17E+01	5.49E-01	5.41%	8.70%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	5.10E-02	mg/kg	#######			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.84E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.84E-03	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	1.43E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	3.42E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.42E-03	1.11E+00	3.08E-03	3.33E+00	1.03E-03	0.02%	0.02%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	0.00E+00	mg/L	4.84E-01	mg/kg	3.02E-01	mg/kg	#######	1.15E+03	6.00E-01	2.87E+01	8.58E-01	1.06E+00	1.06E+00	6.72E-01	6.72E-01	0.00E+00	1.14E-03	0.00E+00	0.00E+00	1.23E-02	4.11E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.46E-02	1.45E+00	3.76E-02	2.00E+01	2.73E-03	0.19%	0.04%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.43E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.43E-06	2.14E+00	3.47E-06	1.07E+01	6.94E-07	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E+01	mg/kg	#######	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E-02	1.00E+00	1.59E-02	5.00E+00	3.19E-03	0.08%	0.05%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.11E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.11E-06	2.14E+00	4.26E-06	1.07E+01	8.51E-07	0.00%	0.00%
Copper	1.23E-02	mg/L	1.08E+01	mg/kg	6.53E+00	mg/kg	#######	1.11E+03	1.56E+00	1.45E+00	4.57E-01	6.22E-01	6.22E-01	8.97E-02	8.97E-02	2.94E-03	2.55E-02	0.00E+00	0.00E+00	7.19E-01	4.49E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.92E-01	4.70E+01	1.69E-02	6.17E+01	1.28E-02	0.08%	0.20%
Dieldrin	0.00E+00	mg/L	2.57E-03	mg/kg	1.72E-04	mg/kg	#######		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	6.05E-06	0.00E+00	0.00E+00	6.34E-04	7.15E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.47E-04	7.70E-02	8.41E-03	2.31E-01	2.80E-03	0.04%	0.04%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-04	mg/kg	#######			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.90E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.90E-06	3.00E-01	3.30E-05	9.00E-01	1.10E-05	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.20E-01	0.00E+00	2.76E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.93E-04	mg/kg	#######			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.16E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.16E-06	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Iron	2.68E+00	mg/L	0.00E+00	mg/kg	9.10E+03	mg/kg	#######	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	6.43E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.55E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.19E+00	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	6.26E-03	mg/L	5.97E+01	mg/kg	2.21E+01	mg/kg	#######	4.48E+02	7.10E-02	4.50E-01	4.37E-02	6.78E-02	6.78E-02	1.16E-02	1.16E-02	1.50E-03	1.41E-01	0.00E+00	0.00E+00	1.80E-01	4.70E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.69E-01	1.13E+00	3.27E-01	1.13E+01	3.27E-02	1.61%	0.52%
Manganese	2.12E-01	mg/L	0.00E+00	mg/kg	8.30E+02	mg/kg	#######	2.50E+02	4.20E-01	2.26E-01	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	5.08E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.86E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.37E-01	9.77E+02	9.59E-04	9.77E+03	9.59E-05	0.00%	0.00%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-02	mg/kg	#######		1.14E+00	7.64E+00	NA	1.41E+00	1.41E+00	9.15E-02	9.15E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.95E-03	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.95E-03	4.50E-01	4.33E-03	9.00E-01	2.17E-03	0.02%	0.03%
Mercury (methyl)	0.00E+00	mg/L	2.09E-01	mg/kg	0.00E+00	mg/kg	#######		1.14E+00	NA	7.56E-01	NA	NA			0.00E+00	4.91E-04	0.00E+00	0.00E+00	1.01E-02	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	1.06E-02	6.40E-03	1.65E+00	6.40E-02	1.65E-01	8.13%	2.62%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.88E-04	mg/kg	#######			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E-05	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	mg/L	0.00E+00	mg/kg	6.36E+00	mg/kg	#######		4.86E-01	1.06E+00	NA	6.84E-02	6.84E-02	8.71E-02	8.71E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.18E-02	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.18E-02	7.74E+01	4.11E-04	1.07E+02	2.97E-04	0.00%	0.00%
Nitrate	4.70E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	1.13E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	6.18E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	3.01E+02								1.48E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.48E-02	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E-04	mg/kg	#######			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.11E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.11E-06	2.14E+00	3.32E-06	1.07E+01	6.64E-07	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+02	0.00E+00	3.20E+02	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.62E-04	mg/kg	#######			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.32E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.32E-05	6.73E+00	3.45E-06	6.73E+01	3.45E-07	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-01	mg/kg	#######			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-02	6.73E+00	1.49E-03	6.73E+01	1.49E-04	0.01%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	7.70E-02	mg/kg	#######			3.00E-01	NA	3.19E+01	3.19E+01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E-04	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E-04	6.50E+01	1.68E-06	1.30E+02	8.40E-07	0.00%	0.00%
Selenium	3.23E-03	mg/L	1.10E+00	mg/kg	3.74E-01	mg/kg	#######	2.05E+02	4.50E+00	1.21E+00	5.12E-01	4.59E-01	4.59E-01	1.51E-01	1.51E-01	7.73E-04	2.59E-03	0.00E+00	0.00E+00	2.11E-01	2.14E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.16E-01	1.80E+00	1.20E-01	5.40E+00	4.01E-02	0.59%	0.64%
Silver	0.00E+00	mg/L	2.05E+00	mg/kg	0.00E+00	mg/kg	#######		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	4.82E-03	0.00E+00	0.00E+00	3.92E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.97E-01	5.44E+00	7.30E-02	5.44E+01	7.30E-03	0.36%	0.12%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.30E+01	mg/kg	#######		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.34E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.34E-03	NA	NA	NA	NA	NA	NA
Sulfate	1.10E+01	mg/L	4.59E+00	mg/kg	1.30E+02	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	2.64E+00	1.08E-02	0.00E+00	0.00E+00	8.19E-02	1.84E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.92E+00	NA	NA	NA	NA	NA	NA
Thallium	1.00E-03	mg/L	6.22E-01	mg/kg	0.00E+00	mg/kg	#######	7.50E+01	4.50E+00							2.40E-04	1.46E-03	0.00E+00	0.00E+00	1.19E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.21E-01	3.50E-01	3.45E-01	1.05E+00	1.15E-01	1.70%	1.82%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E-05	2.14E+00	5.07E-06	1.07E+01	1.01E-06	0.00%	0.00%
Vanadium	0.00E+00	mg/L	0.00E+00	mg/kg	1.45E+01	mg/kg	#######	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.87E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.87E-03	1.14E-01	2.52E-04	3.42E-01	8.40E-05	0.00%	0.00%
Zinc	6.50E-02	mg/L	7.78E+01	mg/kg	4.79E+01	mg/kg	#######	2.91E+03	1.94E+00	6.34E+00	7.15E-01	8.84E-01	8.84E-01	1.84E-01	1.84E-01	1.56E-02	1.83E-01	0.00E+00	0.00E+00	6.41E+00	1.44E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.04E+00	1.45E+01	5.55E-01	1.31E+02	6.14E-02	2.73%	0.97%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	2.2E-05	4.5E-06	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	1.2E-01	1.2E-02	0.58%	0.19%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	4.9E-02	5.0E-03	0.24%	0.08%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	3.1E-03	1.0E-03	0.02%	0.02%
Aldrin/Dieldrin/Endrin EEQ:	8.4E-03	2.8E-03	0.04%	0.04%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi \, x Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0.9	unitless
Terr. Invert diet fraction =	0.1	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0.000034365	kg/d
Food ingestion rate =	0.00069	kg/d
Body weight =	0.0146	kg
Home range =	247	acres
Water intake rate =	0.0035	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-73
Tier 1 COPCs
EEQs and Hazard Indices for the American Woodcock at LHAAP
Low Impact Sub-Area/Goose Praire Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
									-----	Unitless	-----					mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.22E-01	0.00E+00	1.27E+00	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	8.59E-09	mg/L	1.56E-06	mg/kg	3.95E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	8.59E-10	0.00E+00	5.07E-08	0.00E+00	0.00E+00	1.08E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E-05	1.40E-05	7.77E-01	1.40E-04	7.77E-02	5.48%	3.81%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	mg/L	2.97E-03	mg/kg	1.40E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.80E-05	0.00E+00	0.00E+00	2.68E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.70E-03	2.80E-03	9.65E-01	2.80E-02	9.65E-02	6.80%	4.73%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	4.30E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	5.52E-05	0.00E+00	0.00E+00	8.28E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.33E-03	5.80E-02	1.44E-01	5.80E-01	1.44E-02	1.01%	0.70%
4,4'-DDT	0.00E+00	mg/L	3.04E-03	mg/kg	2.23E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	0.00E+00	2.86E-05	0.00E+00	0.00E+00	4.43E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.45E-03	2.80E-03	1.59E+00	2.80E-02	1.59E-01	11.22%	7.80%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.87E-04	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.40E-06	0.00E+00	0.00E+00	3.71E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.73E-04	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.76E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.83E-06	0.00E+00	0.00E+00	7.32E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.36E-04	2.14E+00	3.44E-04	1.07E+01	6.88E-05	0.00%	0.00%
Aluminum	2.10E+00	mg/L	1.03E+04	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	2.10E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E-01	1.10E+02	1.91E-03	3.29E+02	6.37E-04	0.01%	0.03%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	6.37E-01	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	8.18E-03	0.00E+00	0.00E+00	8.96E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.77E-02	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.07E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.94E-05	0.00E+00	0.00E+00	5.98E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.02E-03	4.10E-01	1.47E-02	1.23E+00	4.90E-03	0.10%	0.24%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.42E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.82E-05	0.00E+00	0.00E+00	2.77E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.79E-03	1.80E-01	1.55E-02	1.80E+00	1.55E-03	0.11%	0.08%
Aroclor 1254	0.00E+00	mg/L	5.10E-02	mg/kg	4.11E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	0.00E+00	5.28E-05	0.00E+00	0.00E+00	8.22E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.27E-03	1.80E-01	4.60E-02	1.80E+00	4.60E-03	0.32%	0.23%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	7.47E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	9.59E-05	0.00E+00	0.00E+00	1.57E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.58E-02	1.80E-01	8.78E-02	1.80E+00	8.78E-03	0.62%	0.43%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.50E-04	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.09E-05	0.00E+00	0.00E+00	1.47E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.48E-03	1.80E-01	8.22E-03	1.80E+00	8.22E-04	0.06%	0.04%
Barium	0.00E+00	mg/L	1.34E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.08E+01	0.00E+00	4.17E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	6.80E-02	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	8.73E-04	0.00E+00	0.00E+00	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.12E-01	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	2.43E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	2.43E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.43E-03	1.11E+00	2.19E-03	3.33E+00	7.29E-04	0.02%	0.04%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	0.00E+00	mg/L	5.24E-01	mg/kg	3.84E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.58E+01	8.28E-01	9.52E-01	9.52E-01	9.22E-01	9.22E-01	0.00E+00	0.00E+00	4.93E-03	0.00E+00	0.00E+00	1.22E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.23E+00	1.45E+00	8.46E-01	2.00E+01	6.14E-02	5.97%	3.01%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.88E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.41E-06	0.00E+00	0.00E+00	3.65E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.67E-04	2.14E+00	1.71E-04	1.07E+01	3.43E-05	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.22E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	0.00E+00	0.00E+00	1.57E-01	0.00E+00	0.00E+00	4.78E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.93E+00	1.00E+00	4.93E+00	5.00E+00	9.87E-01	34.80%	48.36%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.18E-06	0.00E+00	0.00E+00	4.81E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.85E-04	2.14E+00	2.26E-04	1.07E+01	4.53E-05	0.00%	0.00%
Copper	1.42E-02	mg/L	1.27E+01	mg/kg	7.43E+00	mg/kg	1.00E+00	5.92E+03	5.25E+00	1.32E+00	4.15E-01	5.75E-01	5.75E-01	1.49E-01	1.49E-01	1.42E-03	0.00E+00	9.54E-02	0.00E+00	0.00E+00	1.21E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E+00	4.70E+01	2.78E-02	6.17E+01	2.11E-02	0.20%	1.04%
Dieldrin	0.00E+00	mg/L	3.00E-03	mg/kg	1.86E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.38E-06	0.00E+00	0.00E+00	3.50E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.52E-04	7.70E-02	4.57E-03	2.31E-01	1.52E-03	0.03%	0.07%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.75E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	3.53E-06	0.00E+00	0.00E+00	5.19E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.22E-04	3.00E-01	1.74E-03	9.00E-01	5.80E-04	0.01%	0.03%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.20E-01	0.00E+00	2.76E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.20E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.83E-06	0.00E+00	0.00E+00	4.22E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.25E-04	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Iron	3.14E+00	mg/L	0.00E+00	mg/kg	1.00E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	3.14E-01	0.00E+00	1.29E+02	0.00E+00	0.00E+00	9.65E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.26E+02	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	7.76E-03	mg/L	7.66E+01	mg/kg	2.51E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	4.39E-01	3.92E-02	6.40E-02	6.40E-02	1.33E-02	1.33E-02	7.76E-04	0.00E+00	3.23E-01	0.00E+00	0.00E+00	1.36E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.69E+00	1.13E+00	1.49E+00	1.13E+01	1.49E-01	10.52%	7.31%
Manganese	2.73E-01	mg/L	0.00E+00	mg/kg	9.35E+02	mg/kg	1.00E+00	2.00E+03	2.10E+00	2.21E-01	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	2.73E-02	0.00E+00	1.20E+01	0.00E+00	0.00E+00	2.55E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.75E+01	9.77E+02	3.84E-02	9.77E+03	3.84E-03	0.27%	0.19%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.95E-02	mg/kg	1.00E+00		2.87E+00	7.16E+00	NA	1.35E+00	1.35E+00	1.03E-01	1.03E-01	0.00E+00	0.00E+00	7.64E-04	0.00E+00	0.00E+00	5.26E-02	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.33E-02	4.50E-01	1.19E-01	9.00E-01	5.93E-02	0.84%	2.90%
Mercury (methyl)	0.00E+00	mg/L	2.65E-01	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	6.78E-01	NA	NA			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	6.40E-03	0.00E+00	6.40E-02	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.41E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.38E-06	0.00E+00	0.00E+00	6.83E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.88E-04	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	mg/L	0.00E+00	mg/kg	7.10E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	NA	6.65E-02	6.65E-02	1.01E-01	1.01E-01	0.00E+00	0.00E+00	9.12E-02	0.00E+00	0.00E+00	4.14E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.24E+00	7.74E+01	5.47E-02	1.07E+02	3.96E-02	0.39%	1.94%
Nitrate	8.86E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	8.86E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.86E-02	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	8.12E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03								8.12E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.12E-03	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.26E-06	0.00E+00	0.00E+00	3.32E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.34E-04	2.14E+00	1.56E-04	1.07E+01	3.12E-05	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+02	0.00E+00	3.20E+02	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	8.83E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.13E-05	0.00E+00	0.00E+00	1.65E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.67E-03	6.73E+00	2.47E-04	6.73E+01	2.47E-05	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	4.23E-01	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	5.43E-03	0.00E+00	0.00E+00	7.74E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.80E-01	6.73E+00	1.16E-01	6.73E+01	1.16E-02	0.82%	0.57%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.80E-01	mg/kg	1.00E+00			1.14E+00	NA	1.88E+01	1.88E+01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	3.59E-03	0.00E+00	0.00E+00	3.94E-02	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.30E-02	6.50E+01	6.61E-04	1.30E+02	3.31E-04	0.00%	0.02%
Selenium	3.74E-03	mg/L	1.29E+00	mg/kg	4.13E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.18E+00	5.20E-01	4.64E-01	4.64E-01	1.95E-01	1.95E-01	3.74E-04	0.00E+00	5.30E-03	0.00E+00	0.00E+00	6.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.56E-02	1.80E+00	3.65E-02	5.40E+00	1.22E-02	0.26%	0.60%
Silver	0.00E+00	mg/L	2.66E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E+00	0.00E+00	5.44E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	1.83E-01	0.00E+00	0.00E+00	4.89E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E-01	NA	NA	NA	NA	NA	NA
Sulfate	1.42E+01	mg/L	6.05E+00	mg/kg	2.30E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	1.42E+00	0.00E+00	2.95E+00	0.00E+00	0.00E+00	3.23E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.67E+01	NA	NA	NA	NA	NA	NA
Thallium	1.70E-03	mg/L	7.02E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00							1.70E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.70E-04	3.50E-01	4.86E-04	1.05E+00	1.62E-04	0.00%	0.01%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.04E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.90E-06	0.00E+00	0.00E+00	5.90E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.94E-04	2.14E+00	2.78E-04	1.07E+01	5.55E-05	0.00%	0.00%
Vanadium	0.00E+00	mg/L	0.00E+00	mg/kg	1.53E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	0.00E+00	0.00E+00	1.97E-01	0.00E+00	0.00E+00	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.63E-01	1.14E+01	3.19E-02	3.42E+01	1.06E-02	0.22%	0.52%
Zinc	8.78E-02	mg/L	9.41E+01	mg/kg	5.89E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.53E+00	6.57E-01	8.08E-01	8.08E-01	4.51E-01	4.51E-01	8.78E-03	0.00E+00	7.56E-01	0.00E+00	0.00E+00	4.01E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.09E+01	1.45E+01	2.82E+00	1.31E+02	3.12E-01	19.90%	15.30%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.2E-03	2.4E-04	0.01%	0.01%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	2.7E+00	2.7E-01	19.04%	13.23%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.7E-01	2.1E-02	1.21%	1.01%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	2.2E-03	7.3E-04	0.02%	0.04%
Aldrin/Dieldrin/Endrin EEQ:	6.3E-03	2.1E-03	0.04%	0.10%

Intake Equation:

$$E_j = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text tables.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	1	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.002529	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.0243	kg/d
Body weight =	0.197	kg
Home range =	0.74	acres
Water intake rate =	0.0197	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-74
Tier 2 COPCs
EEQs and Hazard Indices for the American Woodcock at LHAAP
Low Impact Sub-Area/Goose Praire Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							----------	----------	----------	----------	Unitless	----------	----------	----------		mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.22E-01	0.00E+00	1.27E+00	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	7.00E-09	mg/L	1.27E-06	mg/kg	3.18E-06	mg/kg	#######	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	7.00E-10	0.00E+00	4.09E-08	0.00E+00	0.00E+00	4.32E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.36E-06	1.40E-05	3.12E-01	1.40E-04	3.12E-02	4.61%	3.77%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	mg/L	2.56E-03	mg/kg	8.00E-04	mg/kg	#######		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.03E-05	0.00E+00	0.00E+00	8.84E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.94E-04	2.80E-03	3.19E-01	2.80E-02	3.19E-02	4.72%	3.86%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	3.10E-03	mg/kg	#######		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	3.98E-05	0.00E+00	0.00E+00	3.44E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.48E-03	5.80E-02	6.00E-02	5.80E-01	6.00E-03	0.89%	0.73%
4,4'-DDT	0.00E+00	mg/L	2.61E-03	mg/kg	1.07E-03	mg/kg	#######		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	1.37E-05	0.00E+00	0.00E+00	1.22E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.24E-03	2.80E-03	4.41E-01	2.80E-02	4.41E-02	6.53%	5.34%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	#######			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.26E-06	0.00E+00	0.00E+00	2.01E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.03E-04	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.15E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.05E-06	0.00E+00	0.00E+00	3.53E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.57E-04	2.14E+00	1.67E-04	1.07E+01	3.34E-05	0.00%	0.00%
Aluminum	1.73E+00	mg/L	8.98E+03	mg/kg	0.00E+00	mg/kg	#######	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	1.73E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.73E-01	1.10E+02	1.58E-03	3.29E+02	5.26E-04	0.02%	0.06%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-01	mg/kg	#######			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	6.54E-03	0.00E+00	0.00E+00	1.88E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.54E-02	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.55E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.28E-05	0.00E+00	0.00E+00	2.87E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.90E-03	4.10E-01	7.08E-03	1.23E+00	2.36E-03	0.10%	0.29%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.21E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.55E-05	0.00E+00	0.00E+00	1.36E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.37E-03	1.80E-01	7.64E-03	1.80E+00	7.64E-04	0.11%	0.09%
Aroclor 1254	0.00E+00	mg/L	4.20E-02	mg/kg	3.32E-03	mg/kg	#######		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	4.26E-05	0.00E+00	0.00E+00	3.83E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.87E-03	1.80E-01	2.15E-02	1.80E+00	2.15E-03	0.32%	0.26%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	4.07E-03	mg/kg	#######			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	5.23E-05	0.00E+00	0.00E+00	4.94E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.99E-03	1.80E-01	2.77E-02	1.80E+00	2.77E-03	0.41%	0.34%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	7.92E-04	mg/kg	#######			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.02E-05	0.00E+00	0.00E+00	7.89E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.99E-04	1.80E-01	4.44E-03	1.80E+00	4.44E-04	0.07%	0.05%
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	0.00E+00	mg/kg	#######	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.08E+01	0.00E+00	4.17E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	5.10E-02	mg/kg	#######			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	6.55E-04	0.00E+00	0.00E+00	4.81E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.88E-02	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	1.43E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	1.43E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.43E-03	1.11E+00	1.29E-03	3.33E+00	4.29E-04	0.02%	0.05%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	0.00E+00	mg/L	4.84E-01	mg/kg	3.02E-01	mg/kg	#######	1.15E+03	6.00E-01	2.87E+01	8.58E-01	1.06E+00	1.06E+00	6.72E-01	6.72E-01	0.00E+00	0.00E+00	3.88E-03	0.00E+00	0.00E+00	1.07E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.08E+00	1.45E+00	7.42E-01	2.00E+01	5.38E-02	10.98%	6.51%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.22E-06	0.00E+00	0.00E+00	1.94E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.96E-04	2.14E+00	9.17E-05	1.07E+01	1.83E-05	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E+01	mg/kg	#######	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	0.00E+00	0.00E+00	1.42E-01	0.00E+00	0.00E+00	4.16E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.58E-01	1.00E+00	5.58E-01	5.00E+00	1.12E-01	8.25%	13.49%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.72E-06	0.00E+00	0.00E+00	2.38E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-04	2.14E+00	1.12E-04	1.07E+01	2.25E-05	0.00%	0.00%
Copper	1.23E-02	mg/L	1.08E+01	mg/kg	6.53E+00	mg/kg	#######	1.11E+03	1.56E+00	1.45E+00	4.57E-01	6.22E-01	6.22E-01	8.97E-02	8.97E-02	1.23E-03	0.00E+00	8.38E-02	0.00E+00	0.00E+00	1.17E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.26E+00	4.70E+01	2.67E-02	6.17E+01	2.04E-02	0.40%	2.46%
Dieldrin	0.00E+00	mg/L	2.57E-03	mg/kg	1.72E-04	mg/kg	#######		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.21E-06	0.00E+00	0.00E+00	1.87E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.89E-04	7.70E-02	2.45E-03	2.31E-01	8.18E-04	0.04%	0.10%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-04	mg/kg	#######			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	3.05E-06	0.00E+00	0.00E+00	2.58E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.61E-04	3.00E-01	8.71E-04	9.00E-01	2.90E-04	0.01%	0.04%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.20E-01	0.00E+00	2.76E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.93E-04	mg/kg	#######			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.48E-06	0.00E+00	0.00E+00	2.13E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.16E-04	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Iron	2.68E+00	mg/L	0.00E+00	mg/kg	9.10E+03	mg/kg	#######	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	2.68E-01	0.00E+00	1.17E+02	0.00E+00	0.00E+00	4.04E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.58E+02	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	6.26E-03	mg/L	5.97E+01	mg/kg	2.21E+01	mg/kg	#######	4.48E+02	7.10E-02	4.50E-01	4.37E-02	6.78E-02	6.78E-02	1.16E-02	1.16E-02	6.26E-04	0.00E+00	2.83E-01	0.00E+00	0.00E+00	1.23E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.51E+00	1.13E+00	1.34E+00	1.13E+01	1.34E-01	19.78%	16.17%
Manganese	2.12E-01	mg/L	0.00E+00	mg/kg	8.30E+02	mg/kg	#######	2.50E+02	4.20E-01	2.26E-01	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	2.12E-02	0.00E+00	1.07E+01	0.00E+00	0.00E+00	2.31E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.38E+01	9.77E+02	3.46E-02	9.77E+03	3.46E-03	0.51%	0.42%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-02	mg/kg	#######		1.14E+00	7.64E+00	NA	1.41E+00	1.41E+00	9.15E-02	9.15E-02	0.00E+00	0.00E+00	6.94E-04	0.00E+00	0.00E+00	5.09E-02	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.16E-02	4.50E-01	1.15E-01	9.00E-01	5.73E-02	1.70%	6.94%
Mercury (methyl)	0.00E+00	mg/L	2.09E-01	mg/kg	0.00E+00	mg/kg	#######		1.14E+00	NA	7.56E-01	NA	NA			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	6.40E-03	0.00E+00	6.40E-02	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.88E-04	mg/kg	#######			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.70E-06	0.00E+00	0.00E+00	3.33E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.37E-04	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	mg/L	0.00E+00	mg/kg	6.36E+00	mg/kg	#######		4.86E-01	1.06E+00	NA	6.84E-02	6.84E-02	8.71E-02	8.71E-02	0.00E+00	0.00E+00	8.16E-02	0.00E+00	0.00E+00	8.31E-01	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.12E-01	7.74E+01	1.18E-02	1.07E+02	8.53E-03	0.17%	1.03%
Nitrate	4.70E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	4.70E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.70E-02	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	6.18E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	3.01E+02								6.18E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.18E-03	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E-04	mg/kg	#######			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.19E-06	0.00E+00	0.00E+00	1.85E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.88E-04	2.14E+00	8.77E-05	1.07E+01	1.75E-05	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+02	0.00E+00	3.20E+02	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.62E-04	mg/kg	#######			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	7.21E-06	0.00E+00	0.00E+00	6.06E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.14E-04	6.73E+00	9.12E-05	6.73E+01	9.12E-06	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-01	mg/kg	#######			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.18E-03	0.00E+00	0.00E+00	2.61E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.65E-01	6.73E+00	3.93E-02	6.73E+01	3.93E-03	0.58%	0.48%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	7.70E-02	mg/kg	#######			3.00E-01	NA	3.19E+01	3.19E+01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	9.89E-04	0.00E+00	0.00E+00	2.85E-03	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.84E-03	6.50E+01	5.91E-05	1.30E+02	2.95E-05	0.00%	0.00%
Selenium	3.23E-03	mg/L	1.10E+00	mg/kg	3.74E-01	mg/kg	#######	2.05E+02	4.50E+00	1.21E+00	5.12E-01	4.59E-01	4.59E-01	1.51E-01	1.51E-01	3.23E-04	0.00E+00	4.80E-03	0.00E+00	0.00E+00	5.58E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.09E-02	1.80E+00	3.38E-02	5.40E+00	1.13E-02	0.50%	1.36%
Silver	0.00E+00	mg/L	2.05E+00	mg/kg	0.00E+00	mg/kg	#######		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E+00	0.00E+00	5.44E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.30E+01	mg/kg	#######		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	1.67E-01	0.00E+00	0.00E+00	1.39E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.06E-01	NA	NA	NA	NA	NA	NA
Sulfate	1.10E+01	mg/L	4.59E+00	mg/kg	1.30E+02	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	1.10E+00	0.00E+00	1.67E+00	0.00E+00	0.00E+00	4.81E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.58E+00	NA	NA	NA	NA	NA	NA
Thallium	1.00E-03	mg/L	6.22E-01	mg/kg	0.00E+00	mg/kg	#######	7.50E+01	4.50E+00							1.00E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-04	3.50E-01	2.86E-04	1.05E+00	9.54E-05	0.00%	0.01%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.24E-06	0.00E+00	0.00E+00	2.83E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.86E-04	2.14E+00	1.34E-04	1.07E+01	2.68E-05	0.00%	0.00%
Vanadium	0.00E+00	mg/L	0.00E+00	mg/kg	1.45E+01	mg/kg	#######	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	0.00E+00	0.00E+00	1.86E-01	0.00E+00	0.00E+00	7.50E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.61E-01	1.14E+01	2.29E-02	3.42E+01	7.62E-03	0.34%	0.92%
Zinc	6.50E-02	mg/L	7.78E+01	mg/kg	4.79E+01	mg/kg	#######	2.91E+03	1.94E+00	6.34E+00	7.15E-01	8.84E-01	8.84E-01	1.84E-01	1.84E-01	6.50E-03	0.00E+00	6.16E-01	0.00E+00	0.00E+00	3.75E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.81E+01	1.45E+01	2.63E+00	1.31E+02	2.91E-01	38.91%	35.21%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	5.9E-04	1.2E-04	0.01%	0.01%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	8.2E-01	8.2E-02	12.15%	9.93%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	6.8E-02	8.5E-03	1.01%	1.03%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	1.3E-03	4.3E-04	0.02%	0.05%
Aldrin/Dieldrin/Endrin EEQ:	3.3E-03	1.1E-03	0.05%	0.13%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	1	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.002529	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.0243	kg/d
Body weight =	0.197	kg
Home range =	57	acres
Water intake rate =	0.0197	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-75
Tier 1 COPCs
EEQs and Hazard Indices for the Belted Kingfisher at LHAAP
Low Impact Sub-Area/Goose Praire Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
							Unitless								
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00
2,3,7,8-TCDD TEQ	8.59E-09	mg/L	1.56E-06	mg/kg	3.95E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00
4,4'-DDD	0.00E+00	mg/L	2.97E-03	mg/kg	1.40E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	4.30E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01
4,4'-DDT	0.00E+00	mg/L	3.04E-03	mg/kg	2.23E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.87E-04	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.76E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Aluminum	2.10E+00	mg/L	1.03E+04	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	6.37E-01	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.07E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.42E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00
Aroclor 1254	0.00E+00	mg/L	5.10E-02	mg/kg	4.11E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	7.47E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.50E-04	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00
Barium	0.00E+00	mg/L	1.34E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	6.80E-02	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00
bis(2-ethylhexyl)phthalate	2.43E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00
Cadmium	0.00E+00	mg/L	5.24E-01	mg/kg	3.84E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.58E+01	8.28E-01	9.52E-01	9.52E-01	9.22E-01	9.22E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.88E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.22E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Copper	1.42E-02	mg/L	1.27E+01	mg/kg	7.43E+00	mg/kg	1.00E+00	5.92E+03	5.25E+00	1.32E+00	4.15E-01	5.75E-01	5.75E-01	1.49E-01	1.49E-01
Dieldrin	0.00E+00	mg/L	3.00E-03	mg/kg	1.86E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.75E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.20E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00
Iron	3.14E+00	mg/L	0.00E+00	mg/kg	1.00E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01		
Lead	7.76E-03	mg/L	7.66E+01	mg/kg	2.51E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	4.39E-01	3.92E-02	6.40E-02	6.40E-02	1.33E-02	1.33E-02
Manganese	2.73E-01	mg/L	0.00E+00	mg/kg	9.35E+02	mg/kg	1.00E+00	2.00E+03	2.10E+00	2.21E-01	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.95E-02	mg/kg	1.00E+00		2.87E+00	7.16E+00	NA	1.35E+00	1.35E+00	1.03E-01	1.03E-01
Mercury (methyl)	0.00E+00	mg/L	2.65E-01	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	6.78E-01	NA	NA		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.41E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00
Nickel	0.00E+00	mg/L	0.00E+00	mg/kg	7.10E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	NA	6.65E-02	6.65E-02	1.01E-01	1.01E-01
Nitrate	8.86E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Nitrate/Nitrite	8.12E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	8.83E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	4.23E-01	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.80E-01	mg/kg	1.00E+00			1.14E+00	NA	1.88E+01	1.88E+01	1.66E-01	1.66E-01
Selenium	3.74E-03	mg/L	1.29E+00	mg/kg	4.13E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.18E+00	5.20E-01	4.64E-01	4.64E-01	1.95E-01	1.95E-01
Silver	0.00E+00	mg/L	2.66E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Sulfate	1.42E+01	mg/L	6.05E+00	mg/kg	2.30E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Thallium	1.70E-03	mg/L	7.02E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.04E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Vanadium	0.00E+00	mg/L	0.00E+00	mg/kg	1.53E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03
Zinc	8.78E-02	mg/L	9.41E+01	mg/kg	5.89E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.53E+00	6.57E-01	8.08E-01	8.08E-01	4.51E-01	4.51E-01

Chemical	EED Surface Water (mg/kg-d)	EED Sediment (mg/kg-d)	EED Soil (mg/kg-d)	EED Fish (mg/kg-d)	EED Aq. Invert. (mg/kg-d)	EED Terr. Invert. (mg/kg-d)	EED Aq. Plants (mg/kg-d)	EED Terr. Plants (mg/kg-d)	EED Plant Roots (mg/kg-d)	EED Mammals (mg/kg-d)	EED Birds (mg/kg-d)	Total EED (mg/kg-d)	NOAEL (mg/kg-d)	EEQ N	LOAEL (mg/kg-d)	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.22E-01	0.00E+00	1.27E+00	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	9.28E-10	1.09E-08	0.00E+00	1.79E-04	5.97E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.79E-04	1.40E-05	1.28E+01	1.40E-04	1.28E+00	29.16%	12.59%
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	2.08E-05	0.00E+00	0.00E+00	2.18E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.26E-05	2.80E-03	1.52E-02	2.80E-02	1.52E-03	0.03%	0.01%
4,4'-DDE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.80E-02	0.00E+00	5.80E-01	0.00E+00	0.00%	0.00%
4,4'-DDT	0.00E+00	2.12E-05	0.00E+00	0.00E+00	8.94E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E-04	2.80E-03	3.95E-02	2.80E-02	3.95E-03	0.09%	0.04%
Aldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Aluminum	2.27E-01	7.19E+01	0.00E+00	1.10E+00	8.10E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.83E+02	1.10E+02	8.05E+00	3.29E+02	2.68E+00	18.33%	26.38%
Antimony	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.10E-01	0.00E+00	1.23E+00	0.00E+00	0.00%	0.00%
Aroclor 1248	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Aroclor 1254	0.00E+00	3.56E-04	0.00E+00	0.00E+00	1.95E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.99E-02	1.80E-01	1.10E-01	1.80E+00	1.10E-02	0.25%	0.11%
Aroclor 1260	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Aroclor 1268	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Barium	0.00E+00	9.34E-01	0.00E+00	0.00E+00	1.05E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E+01	2.08E+01	5.51E-01	4.17E+01	2.75E-01	1.25%	2.70%
Benzoic Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	2.62E-03	0.00E+00	0.00E+00	4.60E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.61E+00	1.11E+00	4.15E+00	3.33E+00	1.38E+00	9.45%	13.60%
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	0.00E+00	3.66E-03	0.00E+00	0.00E+00	7.32E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.69E-02	1.45E+00	5.30E-02	2.00E+01	3.84E-03	0.12%	0.04%
Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Chromium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
cis-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Copper	1.53E-03	8.84E-02	0.00E+00	1.03E+01	1.16E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E+01	4.70E+01	2.45E-01	6.17E+01	1.87E-01	0.56%	1.83%
Dieldrin	0.00E+00	2.09E-05	0.00E+00	0.00E+00	3.04E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.25E-04	7.70E-02	4.22E-03	2.31E-01	1.41E-03	0.01%	0.01%
Endrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-02	0.00E+00	1.00E-01	0.00E+00	0.00%	0.00%
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.20E-01	0.00E+00	2.76E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Iron	3.40E-01	0.00E+00	0.00E+00	3.85E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.85E+02	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	8.39E-04	5.35E-01	0.00E+00	1.43E+00	8.13E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.77E+00	3.85E+00	7.20E-01	1.16E+01	2.40E-01	1.64%	2.36%
Manganese	2.95E-02	0.00E+00	0.00E+00	6.68E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.68E+01	9.77E+02	6.84E-02	9.77E+03	6.84E-03	0.16%	0.07%
Mercury (inorganic)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.50E-01	0.00E+00	9.00E-01	0.00E+00	0.00%	0.00%
Mercury (methyl)	0.00E+00	1.85E-03	0.00E+00	0.00E+00	1.33E-02	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	1.51E-02	6.40E-03	2.36E+00	6.40E-02	2.36E-01	5.38%	2.32%
Mirex	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.74E+01	0.00E+00	1.07E+02	0.00E+00	0.00%	0.00%
Nitrate	9.58E-02	0.00E+00	0.00E+00	1.16E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.16E+02	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	8.78E-03	0.00E+00	0.00E+00	1.06E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.06E+01	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+02	0.00E+00	3.20E+02	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E+00	0.00E+00	6.73E+01	0.00E+00	0.00%	0.00%
Pentachlorophenol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E+00	0.00E+00	6.73E+01	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.50E+01	0.00E+00	1.30E+02	0.00E+00	0.00%	0.00%
Selenium	4.04E-04	9.01E-03	0.00E+00	9.38E-02	1.02E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.05E-01	4.40E-01	4.65E-01	1.50E+00	1.36E-01	1.06%	1.34%
Silver	0.00E+00	1.86E-02	0.00E+00	0.00E+00	2.09E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.28E-01	5.44E+00	4.19E-02	5.44E+01	4.19E-03	0.10%	0.04%
Strontium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Sulfate	1.54E+00	4.23E-02	0.00E+00	1.86E+03	2.22E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.86E+03	NA	NA	NA	NA	NA	NA
Thallium	1.84E-04	4.90E-03	0.00E+00	3.31E+00	5.52E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.37E+00	3.50E-01	9.62E+00	1.05E+00	3.21E+00	21.92%	31.54%
trans-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Vanadium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.14E+01	0.00E+00	3.42E+01	0.00E+00	0.00%	0.00%
Zinc	9.49E-03	6.57E-01	0.00E+00	5.37E+01	1.24E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.68E+01	1.45E+01	4.60E+00	1.31E+02	5.10E-01	10.49%	5.01%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	0.0E+00	0.0E+00	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	5.5E-02	5.5E-03	0.12%	0.05%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.1E-01	1.1E-02	0.25%	0.11%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	4.2E+00	1.4E+00	9.45%	13.60%
Aldrin/Dieldrin/Endrin EEQ:	4.2E-03	1.4E-03	0.01%	0.01%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\,x\,Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.875	unitless
Aq. Invert diet fraction =	0.125	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0.00103359	kg/d
Food ingestion rate =	0.0207	kg/d
Body weight =	0.148	kg
Home range =	118.6101	acres
Water intake rate =	0.016	L/d
Site Area =	246	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-76
Tier 2 COPCs
EEQs and Hazard Indices for the Belted Kingfisher at LHAAP
Low Impact Sub-Area/Goose Praire Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							-----Unitless-----									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.22E-01	0.00E+00	1.27E+00	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	7.00E-09	mg/L	1.27E-06	mg/kg	3.18E-06	mg/kg	#######	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	1.00E-10	1.18E-09	0.00E+00	2.63E-06	1.38E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.64E-06	1.40E-05	1.89E-01	1.40E-04	1.89E-02	10.37%	3.86%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	mg/L	2.56E-03	mg/kg	8.00E-04	mg/kg	#######		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	2.37E-06	0.00E+00	0.00E+00	2.49E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.87E-06	2.80E-03	1.74E-03	2.80E-02	1.74E-04	0.10%	0.04%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	3.10E-03	mg/kg	#######		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.80E-02	0.00E+00	5.80E-01	0.00E+00	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	2.61E-03	mg/kg	1.07E-03	mg/kg	#######		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	2.42E-06	0.00E+00	0.00E+00	1.02E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.26E-05	2.80E-03	4.50E-03	2.80E-02	4.50E-04	0.25%	0.09%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	#######			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.15E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Aluminum	1.73E+00	mg/L	8.98E+03	mg/kg	0.00E+00	mg/kg	#######	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	2.48E-02	8.32E+00	0.00E+00	1.21E-01	9.38E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.02E+02	1.10E+02	9.32E-01	3.29E+02	3.11E-01	51.24%	63.53%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-01	mg/kg	#######			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.55E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.10E-01	0.00E+00	1.23E+00	0.00E+00	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.21E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	4.20E-02	mg/kg	3.32E-03	mg/kg	#######		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	3.89E-05	0.00E+00	0.00E+00	4.55E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.94E-04	1.80E-01	2.75E-03	1.80E+00	2.75E-04	0.15%	0.06%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	4.07E-03	mg/kg	#######			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	7.92E-04	mg/kg	#######			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	0.00E+00	mg/kg	#######	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	1.09E-01	0.00E+00	0.00E+00	1.23E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.34E+00	2.08E+01	6.45E-02	4.17E+01	3.22E-02	3.55%	6.58%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	5.10E-02	mg/kg	#######			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	1.43E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	2.05E-04	0.00E+00	0.00E+00	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.66E-01	1.11E+00	1.50E-01	3.33E+00	4.99E-02	8.23%	10.20%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	0.00E+00	mg/L	4.84E-01	mg/kg	3.02E-01	mg/kg	#######	1.15E+03	6.00E-01	2.87E+01	8.58E-01	1.06E+00	1.06E+00	6.72E-01	6.72E-01	0.00E+00	4.49E-04	0.00E+00	0.00E+00	6.74E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.12E-03	1.45E+00	7.74E-04	2.00E+01	5.61E-05	0.04%	0.01%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E+01	mg/kg	#######	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Copper	1.23E-02	mg/L	1.08E+01	mg/kg	6.53E+00	mg/kg	#######	1.11E+03	1.56E+00	1.45E+00	4.57E-01	6.22E-01	6.22E-01	8.97E-02	8.97E-02	1.76E-04	1.00E-02	0.00E+00	2.21E-01	3.92E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.71E-01	4.70E+01	5.76E-03	6.17E+01	4.39E-03	0.32%	0.90%
Dieldrin	0.00E+00	mg/L	2.57E-03	mg/kg	1.72E-04	mg/kg	#######		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	2.38E-06	0.00E+00	0.00E+00	3.46E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.70E-05	7.70E-02	4.80E-04	2.31E-01	1.60E-04	0.03%	0.03%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-04	mg/kg	#######			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-02	0.00E+00	1.00E-01	0.00E+00	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.20E-01	0.00E+00	2.76E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.93E-04	mg/kg	#######			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Iron	2.68E+00	mg/L	0.00E+00	mg/kg	9.10E+03	mg/kg	#######	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	3.85E-02	0.00E+00	0.00E+00	1.09E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	6.26E-03	mg/L	5.97E+01	mg/kg	2.21E+01	mg/kg	#######	4.48E+02	7.10E-02	4.50E-01	4.37E-02	6.78E-02	6.78E-02	1.16E-02	1.16E-02	8.98E-05	5.54E-02	0.00E+00	4.55E-02	9.84E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E-01	3.85E+00	2.88E-02	1.16E+01	9.60E-03	1.58%	1.96%
Manganese	2.12E-01	mg/L	0.00E+00	mg/kg	8.30E+02	mg/kg	#######	2.50E+02	4.20E-01	2.26E-01	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	3.04E-03	0.00E+00	0.00E+00	8.61E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.64E-01	9.77E+02	8.85E-04	9.77E+03	8.85E-05	0.05%	0.02%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-02	mg/kg	#######		1.14E+00	7.64E+00	NA	1.41E+00	1.41E+00	9.15E-02	9.15E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.50E-01	0.00E+00	9.00E-01	0.00E+00	0.00%	0.00%
Mercury (methyl)	0.00E+00	mg/L	2.09E-01	mg/kg	0.00E+00	mg/kg	#######		1.14E+00	NA	7.56E-01	NA	NA			0.00E+00	1.94E-04	0.00E+00	0.00E+00	5.50E-04	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	7.44E-04	6.40E-03	1.16E-01	6.40E-02	1.16E-02	6.39%	2.38%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.88E-04	mg/kg	#######			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	mg/L	0.00E+00	mg/kg	6.36E+00	mg/kg	#######		4.86E-01	1.06E+00	NA	6.84E-02	6.84E-02	8.71E-02	8.71E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.74E+01	0.00E+00	1.07E+02	0.00E+00	0.00%	0.00%
Nitrate	4.70E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	6.75E-03	0.00E+00	0.00E+00	2.30E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.31E-01	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	6.18E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	3.01E+02								8.87E-04	0.00E+00	0.00E+00	3.02E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.03E-01	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E-04	mg/kg	#######			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+02	0.00E+00	3.20E+02	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.62E-04	mg/kg	#######			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E+00	0.00E+00	6.73E+01	0.00E+00	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-01	mg/kg	#######			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E+00	0.00E+00	6.73E+01	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	7.70E-02	mg/kg	#######			3.00E-01	NA	3.19E+01	3.19E+01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.50E+01	0.00E+00	1.30E+02	0.00E+00	0.00%	0.00%
Selenium	3.23E-03	mg/L	1.10E+00	mg/kg	3.74E-01	mg/kg	#######	2.05E+02	4.50E+00	1.21E+00	5.12E-01	4.59E-01	4.59E-01	1.51E-01	1.51E-01	4.63E-05	1.02E-03	0.00E+00	1.07E-02	1.15E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.33E-02	4.40E-01	5.30E-02	1.50E+00	1.55E-02	2.91%	3.18%
Silver	0.00E+00	mg/L	2.05E+00	mg/kg	0.00E+00	mg/kg	#######		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	1.90E-03	0.00E+00	0.00E+00	2.14E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.33E-02	5.44E+00	4.28E-03	5.44E+01	4.28E-04	0.24%	0.09%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.30E+01	mg/kg	#######		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Sulfate	1.10E+01	mg/L	4.59E+00	mg/kg	1.30E+02	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	1.58E-01	4.25E-03	0.00E+00	5.38E+01	4.47E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.40E+01	NA	NA	NA	NA	NA	NA
Thallium	1.00E-03	mg/L	6.22E-01	mg/kg	0.00E+00	mg/kg	#######	7.50E+01	4.50E+00							1.44E-05	5.77E-04	0.00E+00	1.22E-03	6.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.31E-03	3.50E-01	2.37E-02	1.05E+00	7.91E-03	1.31%	1.62%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Vanadium	0.00E+00	mg/L	0.00E+00	mg/kg	1.45E+01	mg/kg	#######	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.14E+01	0.00E+00	3.42E+01	0.00E+00	0.00%	0.00%
Zinc	6.50E-02	mg/L	7.78E+01	mg/kg	4.79E+01	mg/kg	#######	2.91E+03	1.94E+00	6.34E+00	7.15E-01	8.84E-01	8.84E-01	1.84E-01	1.84E-01	9.33E-04	7.22E-02	0.00E+00	3.07E+00	3.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.50E+00	1.45E+01	2.41E-01	1.31E+02	2.67E-02	13.26%	5.46%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	0.0E+00	0.0E+00	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	6.2E-03	6.2E-04	0.34%	0.13%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	2.7E-03	2.7E-04	0.15%	0.06%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	1.5E-01	5.0E-02	8.23%	10.20%
Aldrin/Dieldrin/Endrin EEQ:	4.8E-04	1.6E-04	0.03%	0.03%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.875	unitless
Aq. Invert diet fraction =	0.125	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0.001034	kg/d
Food ingestion rate =	0.0207	kg/d
Body weight =	0.148	kg
Home range =	1853	acres
Water intake rate =	0.016	L/d
Site Area =	246	acres
Area Use Factor (AUF) =	0.132758	unitless
Exposure Duration (ED) =	1	unitless

Table E-77
Tier 1 COPCs
EEQs and Hazard Indices for the Red-tailed Hawk at LHAAP
Low Impact Sub-Area/Goose Praire Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
									----Unitless----						
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00
2,3,7,8-TCDD TEQ	8.59E-09	mg/L	1.56E-06	mg/kg	3.95E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00
4,4'-DDD	0.00E+00	mg/L	2.97E-03	mg/kg	1.40E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	4.30E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01
4,4'-DDT	0.00E+00	mg/L	3.04E-03	mg/kg	2.23E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.87E-04	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.76E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Aluminum	2.10E+00	mg/L	1.03E+04	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	6.37E-01	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.07E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.42E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00
Aroclor 1254	0.00E+00	mg/L	5.10E-02	mg/kg	4.11E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	7.47E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.50E-04	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00
Barium	0.00E+00	mg/L	1.34E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	6.80E-02	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00
bis(2-ethylhexyl)phthalate	2.43E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00
Cadmium	0.00E+00	mg/L	5.24E-01	mg/kg	3.84E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.58E+01	8.28E-01	9.52E-01	9.52E-01	9.22E-01	9.22E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.88E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.22E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Copper	1.42E-02	mg/L	1.27E+01	mg/kg	7.43E+00	mg/kg	1.00E+00	5.92E+03	5.25E+00	1.32E+00	4.15E-01	5.75E-01	5.75E-01	1.49E-01	1.49E-01
Dieldrin	0.00E+00	mg/L	3.00E-03	mg/kg	1.86E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.75E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.20E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00
Iron	3.14E+00	mg/L	0.00E+00	mg/kg	1.00E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01		
Lead	7.76E-03	mg/L	7.66E+01	mg/kg	2.51E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	4.39E-01	3.92E-02	6.40E-02	6.40E-02	1.33E-02	1.33E-02
Manganese	2.73E-01	mg/L	0.00E+00	mg/kg	9.35E+02	mg/kg	1.00E+00	2.00E+03	2.10E+00	2.21E-01	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.95E-02	mg/kg	1.00E+00		2.87E+00	7.16E+00	NA	1.35E+00	1.35E+00	1.03E-01	1.03E-01
Mercury (methyl)	0.00E+00	mg/L	2.65E-01	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	6.78E-01	NA	NA		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.41E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00
Nickel	0.00E+00	mg/L	0.00E+00	mg/kg	7.10E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	NA	6.65E-02	6.65E-02	1.01E-01	1.01E-01
Nitrate	8.86E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Nitrate/Nitrite	8.12E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	8.83E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	4.23E-01	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.80E-01	mg/kg	1.00E+00			1.14E+00	NA	1.88E+01	1.88E+01	1.66E-01	1.66E-01
Selenium	3.74E-03	mg/L	1.29E+00	mg/kg	4.13E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.18E+00	5.20E-01	4.64E-01	4.64E-01	1.95E-01	1.95E-01
Silver	0.00E+00	mg/L	2.66E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Sulfate	1.42E+01	mg/L	6.05E+00	mg/kg	2.30E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Thallium	1.70E-03	mg/L	7.02E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.04E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Vanadium	0.00E+00	mg/L	0.00E+00	mg/kg	1.53E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03
Zinc	8.78E-02	mg/L	9.41E+01	mg/kg	5.89E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.53E+00	6.57E-01	8.08E-01	8.08E-01	4.51E-01	4.51E-01

Chemical	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL		LOAEL		Percent Contribution to	Percent Contribution to
	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	EEQ N	mg/kg-d	EEQ L	EEQ N	EEQ L
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.22E-01	0.00E+00	1.27E+00	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	4.88E-10	0.00E+00	2.38E-09	1.14E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.56E-09	7.96E-10	1.14E-05	1.40E-05	8.17E-01	1.40E-04	8.17E-02	37.22%	17.89%
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	0.00E+00	8.43E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.06E-05	5.35E-06	3.68E-05	2.80E-03	1.31E-02	2.80E-02	1.31E-03	0.60%	0.29%
4,4'-DDE	0.00E+00	0.00E+00	2.59E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.11E-05	1.42E-05	9.78E-05	5.80E-02	1.69E-03	5.80E-01	1.69E-04	0.08%	0.04%
4,4'-DDT	0.00E+00	0.00E+00	1.34E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.03E-05	1.23E-05	8.39E-05	2.80E-03	3.00E-02	2.80E-02	3.00E-03	1.37%	0.66%
Aldrin	0.00E+00	0.00E+00	1.13E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.09E-06	7.14E-07	4.92E-06	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	0.00E+00	2.27E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.22E-06	1.44E-06	9.89E-06	2.14E+00	4.62E-06	1.07E+01	9.24E-07	0.00%	0.00%
Aluminum	1.19E-01	0.00E+00	0.00E+00	7.06E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E-01	1.10E+02	1.73E-03	3.29E+02	5.77E-04	0.08%	0.13%
Antimony	0.00E+00	0.00E+00	3.83E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.01E-03	3.51E-04	2.74E-03	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	0.00E+00	1.85E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.71E-05	1.17E-05	8.06E-05	4.10E-01	1.97E-04	1.23E+00	6.56E-05	0.01%	0.01%
Aroclor 1248	0.00E+00	0.00E+00	8.54E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.10E-05	5.42E-06	3.73E-05	1.80E-01	2.07E-04	1.80E+00	2.07E-05	0.01%	0.00%
Aroclor 1254	0.00E+00	0.00E+00	2.47E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.28E-05	1.45E-05	9.97E-05	1.80E-01	5.54E-04	1.80E+00	5.54E-05	0.03%	0.01%
Aroclor 1260	0.00E+00	0.00E+00	4.50E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.72E-04	4.75E-05	3.24E-04	1.80E-01	1.80E-03	1.80E+00	1.80E-04	0.08%	0.04%
Aroclor 1268	0.00E+00	0.00E+00	5.12E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.86E-05	3.24E-06	2.23E-05	1.80E-01	1.24E-04	1.80E+00	1.24E-05	0.01%	0.00%
Barium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.08E+01	0.00E+00	4.17E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	0.00E+00	4.09E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.49E-03	2.59E-04	1.79E-03	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	1.38E-03	0.00E+00	0.00E+00	2.95E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.96E-01	1.11E+00	2.67E-01	3.33E+00	8.89E-02	12.15%	19.46%
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	0.00E+00	0.00E+00	2.31E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.72E-03	1.17E-03	8.12E-03	1.45E+00	5.60E-03	2.00E+01	4.06E-04	0.26%	0.09%
Chlordane	0.00E+00	0.00E+00	1.13E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.10E-06	7.16E-07	4.93E-06	2.14E+00	2.30E-06	1.07E+01	4.60E-07	0.00%	0.00%
Chromium	0.00E+00	0.00E+00	7.37E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.74E-02	1.35E-02	9.83E-02	1.00E+00	9.83E-02	5.00E+00	1.97E-02	4.48%	4.30%
cis-Nonachlor	0.00E+00	0.00E+00	1.49E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.41E-06	9.45E-07	6.51E-06	2.14E+00	3.04E-06	1.07E+01	6.08E-07	0.00%	0.00%
Copper	8.05E-04	0.00E+00	4.47E-03	6.56E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.11E-02	3.68E-03	6.86E-01	4.70E+01	1.46E-02	6.17E+01	1.11E-02	0.67%	2.44%
Dieldrin	0.00E+00	0.00E+00	1.12E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.06E-06	7.08E-07	4.88E-06	7.70E-02	6.33E-05	2.31E-01	2.11E-05	0.00%	0.00%
Endrin	0.00E+00	0.00E+00	1.66E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.35E-06	1.11E-06	7.63E-06	1.00E-02	7.63E-04	1.00E-01	7.63E-05	0.03%	0.02%
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.20E-01	0.00E+00	2.76E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	0.00E+00	1.33E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.82E-06	8.41E-07	5.79E-06	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Iron	1.79E-01	0.00E+00	6.04E+00	2.46E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.94E-01	6.87E-02	3.13E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	4.41E-04	0.00E+00	1.51E-02	9.12E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.34E-03	1.11E-03	1.14E-01	3.85E+00	2.97E-02	1.16E+01	9.89E-03	1.35%	2.16%
Manganese	1.55E-02	0.00E+00	5.63E-01	4.27E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.70E-01	2.97E-02	5.05E+00	9.77E+02	5.17E-03	9.77E+03	5.17E-04	0.24%	0.11%
Mercury (inorganic)	0.00E+00	0.00E+00	3.58E-05	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	1.16E-04	2.03E-05	1.72E-04	4.50E-01	3.83E-04	9.00E-01	1.92E-04	0.02%	0.04%
Mercury (methyl)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	6.40E-03	0.00E+00	6.40E-02	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	0.00E+00	2.05E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.46E-06	1.30E-06	8.97E-06	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	0.00E+00	4.28E-03	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	1.36E-02	2.38E-03	2.03E-02	7.74E+01	2.62E-04	1.07E+02	1.89E-04	0.01%	0.04%
Nitrate	5.04E-02	0.00E+00	0.00E+00	7.41E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.46E+00	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	4.61E-03	0.00E+00	0.00E+00	6.79E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.83E-01	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	0.00E+00	1.06E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.84E-06	6.71E-07	4.62E-06	2.14E+00	2.16E-06	1.07E+01	4.32E-07	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+02	0.00E+00	3.20E+02	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	0.00E+00	5.32E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.93E-05	3.37E-06	2.32E-05	6.73E+00	3.45E-06	6.73E+01	3.45E-07	0.00%	0.00%
Pentachlorophenol	0.00E+00	0.00E+00	2.54E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.24E-03	1.61E-03	1.11E-02	6.73E+00	1.65E-03	6.73E+01	1.65E-04	0.08%	0.04%
Perchlorate	0.00E+00	0.00E+00	1.69E-04	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	8.83E-04	1.54E-04	1.21E-03	6.50E+01	1.85E-05	1.30E+02	9.27E-06	0.00%	0.00%
Selenium	2.12E-04	0.00E+00	2.48E-04	6.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.53E-03	2.66E-04	8.25E-03	4.40E-01	1.88E-02	1.50E+00	5.50E-03	0.85%	1.20%
Silver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E+00	0.00E+00	5.44E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	0.00E+00	8.59E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.50E-02	7.85E-03	6.14E-02	NA	NA	NA	NA	NA	NA
Sulfate	8.10E-01	0.00E+00	1.38E-01	1.19E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.25E-01	1.27E-01	1.21E+02	NA	NA	NA	NA	NA	NA
Thallium	9.66E-05	0.00E+00	0.00E+00	2.12E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.12E-01	3.50E-01	6.05E-01	1.05E+00	2.02E-01	27.56%	44.15%
trans-Nonachlor	0.00E+00	0.00E+00	1.83E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.63E-06	1.16E-06	7.98E-06	2.14E+00	3.73E-06	1.07E+01	7.45E-07	0.00%	0.00%
Vanadium	0.00E+00	0.00E+00	9.23E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.72E-03	3.01E-04	1.13E-02	1.14E+01	9.87E-04	3.42E+01	3.29E-04	0.04%	0.07%
Zinc	4.99E-03	0.00E+00	3.54E-02	3.44E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.03E-01	8.79E-02	4.07E+00	1.45E+01	2.81E-01	1.31E+02	3.11E-02	12.78%	6.80%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.6E-05	3.2E-06	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	4.5E-02	4.5E-03	2.04%	0.98%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	2.9E-03	3.3E-04	0.13%	0.07%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	2.7E-01	8.9E-02	12.15%	19.46%
Aldrin/Dieldrin/Endrin EEQ:	8.3E-04	9.7E-05	0.04%	0.02%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

<u>Where:</u>
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

<u>Notes:</u>
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

<u>Species-Specific Factors</u>

Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.26	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0.63	unitless
Bird diet fraction =	0.11	unitless
Soil ingestion rate =	0.000678	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.0339	kg/d
Body weight =	1.126	kg
Home range =	941	acres
Water intake rate =	0.064	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-78
Tier 2 COPCs
EEQs and Hazard Indices for the Red-tailed Hawk at LHAAP
Low Impact Sub-Area/Goose Praire Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							-----	-----	-----	-----	Unitless	-----	-----	-----	-----	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.22E-01	0.00E+00	1.27E+00	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	7.00E-09	mg/L	1.27E-06	mg/kg	3.18E-06	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	3.98E-10	0.00E+00	1.92E-09	1.26E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.85E-09	4.98E-10	1.27E-06	1.40E-05	9.08E-02	1.40E-04	9.08E-03	24.90%	13.78%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	mg/L	2.56E-03	mg/kg	8.00E-04	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.82E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E-05	2.32E-06	1.61E-05	2.80E-03	5.75E-03	2.80E-02	5.75E-04	1.58%	0.87%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	3.10E-03	mg/kg	1.00E+00		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	1.87E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.54E-05	9.67E-06	6.69E-05	5.80E-02	1.15E-03	5.80E-01	1.15E-04	0.32%	0.18%
4,4'-DDT	0.00E+00	mg/L	2.61E-03	mg/kg	1.07E-03	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	6.43E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-05	3.14E-06	2.17E-05	2.80E-03	7.77E-03	2.80E-02	7.77E-04	2.13%	1.18%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.06E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.93E-06	5.11E-07	3.54E-06	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.15E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.90E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.24E-06	9.15E-07	6.34E-06	2.14E+00	2.96E-06	1.07E+01	5.93E-07	0.00%	0.00%
Aluminum	1.73E+00	mg/L	8.98E+03	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	9.83E-02	0.00E+00	0.00E+00	5.82E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.57E-01	1.10E+02	1.43E-03	3.29E+02	4.76E-04	0.39%	0.72%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-01	mg/kg	1.00E+00			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	3.07E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E-03	1.87E-04	1.56E-03	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.55E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.54E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.24E-05	7.41E-06	5.14E-05	4.10E-01	1.25E-04	1.23E+00	4.18E-05	0.03%	0.06%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.21E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	7.27E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.01E-05	3.51E-06	2.43E-05	1.80E-01	1.35E-04	1.80E+00	1.35E-05	0.04%	0.02%
Aroclor 1254	0.00E+00	mg/L	4.20E-02	mg/kg	3.32E-03	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	2.00E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.13E-05	5.47E-06	3.88E-05	1.80E-01	2.15E-04	1.80E+00	2.15E-05	0.06%	0.03%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	4.07E-03	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	2.45E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.29E-04	2.25E-05	1.54E-04	1.80E-01	8.55E-04	1.80E+00	8.55E-05	0.23%	0.13%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	7.92E-04	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.77E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.32E-05	2.30E-06	1.59E-05	1.80E-01	8.86E-05	1.80E+00	8.86E-06	0.02%	0.01%
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.08E+01	0.00E+00	4.17E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	5.10E-02	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.07E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.48E-04	1.48E-04	1.03E-03	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	1.43E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	8.12E-04	0.00E+00	0.00E+00	7.99E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.07E-02	1.11E+00	7.27E-02	3.33E+00	2.42E-02	19.96%	36.81%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	0.00E+00	mg/L	4.84E-01	mg/kg	3.02E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	2.87E+01	8.58E-01	1.06E+00	1.06E+00	6.72E-01	6.72E-01	0.00E+00	0.00E+00	1.82E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.86E-03	6.74E-04	4.71E-03	1.45E+00	3.25E-03	2.00E+01	2.36E-04	0.89%	0.36%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.04E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.88E-06	5.02E-07	3.48E-06	2.14E+00	1.63E-06	1.07E+01	3.25E-07	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	0.00E+00	0.00E+00	6.63E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.77E-02	3.09E-03	2.74E-02	1.00E+00	2.74E-02	5.00E+00	5.48E-03	7.52%	8.32%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.28E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.52E-06	6.15E-07	4.27E-06	2.14E+00	1.99E-06	1.07E+01	3.99E-07	0.00%	0.00%
Copper	1.23E-02	mg/L	1.08E+01	mg/kg	6.53E+00	mg/kg	1.00E+00	1.11E+03	1.56E+00	1.45E+00	4.57E-01	6.22E-01	6.22E-01	8.97E-02	8.97E-02	6.97E-04	0.00E+00	3.93E-03	1.07E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E-02	1.94E-03	1.24E-01	4.70E+01	2.64E-03	6.17E+01	2.01E-03	0.73%	3.06%
Dieldrin	0.00E+00	mg/L	2.57E-03	mg/kg	1.72E-04	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.03E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.86E-06	4.99E-07	3.46E-06	7.70E-02	4.49E-05	2.31E-01	1.50E-05	0.01%	0.02%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	1.43E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.48E-06	9.56E-07	6.58E-06	1.00E-02	6.58E-04	1.00E-01	6.58E-05	0.18%	0.10%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.20E-01	0.00E+00	2.76E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.93E-04	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.16E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.21E-06	5.60E-07	3.89E-06	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Iron	2.68E+00	mg/L	0.00E+00	mg/kg	9.10E+03	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	1.52E-01	0.00E+00	5.48E+00	5.25E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.03E-01	5.30E-02	1.12E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	6.26E-03	mg/L	5.97E+01	mg/kg	2.21E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	4.50E-01	4.37E-02	6.78E-02	6.78E-02	1.16E-02	1.16E-02	3.56E-04	0.00E+00	1.33E-02	2.19E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.88E-03	8.51E-04	4.13E-02	3.85E+00	1.07E-02	1.16E+01	3.58E-03	2.94%	5.43%
Manganese	2.12E-01	mg/L	0.00E+00	mg/kg	8.30E+02	mg/kg	1.00E+00	2.50E+02	4.20E-01	2.26E-01	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	1.21E-02	0.00E+00	4.99E-01	4.15E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.19E-01	2.08E-02	1.07E+00	9.77E+02	1.09E-03	9.77E+03	1.09E-04	0.30%	0.17%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-02	mg/kg	1.00E+00		1.14E+00	7.64E+00	NA	1.41E+00	1.41E+00	9.15E-02	9.15E-02	0.00E+00	0.00E+00	3.25E-05	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	9.37E-05	1.64E-05	1.43E-04	4.50E-01	3.17E-04	9.00E-01	1.58E-04	0.09%	0.24%
Mercury (methyl)	0.00E+00	mg/L	2.09E-01	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	7.56E-01	NA	NA			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	6.40E-03	0.00E+00	6.40E-02	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.88E-04	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.74E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.80E-06	8.37E-07	5.81E-06	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	mg/L	0.00E+00	mg/kg	6.36E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	NA	6.84E-02	6.84E-02	8.71E-02	8.71E-02	0.00E+00	0.00E+00	3.83E-03	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	1.05E-02	1.83E-03	1.62E-02	7.74E+01	2.09E-04	1.07E+02	1.51E-04	0.06%	0.23%
Nitrate	4.70E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	2.67E-02	0.00E+00	0.00E+00	1.11E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E+00	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	6.18E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02								3.51E-03	0.00E+00	0.00E+00	1.46E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.49E-01	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E-04	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.03E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.84E-06	4.95E-07	3.43E-06	2.14E+00	1.60E-06	1.07E+01	3.21E-07	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+02	0.00E+00	3.20E+02	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.62E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.38E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.34E-06	1.63E-06	1.13E-05	6.73E+00	1.68E-06	6.73E+01	1.68E-07	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-01	mg/kg	1.00E+00			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.49E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.11E-03	7.18E-04	4.98E-03	6.73E+00	7.40E-04	6.73E+01	7.40E-05	0.20%	0.11%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	7.70E-02	mg/kg	1.00E+00			3.00E-01	NA	3.19E+01	3.19E+01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	4.64E-05	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	1.62E-04	2.82E-05	2.36E-04	6.50E+01	3.64E-06	1.30E+02	1.82E-06	0.00%	0.00%
Selenium	3.23E-03	mg/L	1.10E+00	mg/kg	3.74E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.21E+00	5.12E-01	4.59E-01	4.59E-01	1.51E-01	1.51E-01	1.83E-04	0.00E+00	2.25E-04	5.18E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E-03	1.87E-04	6.84E-03	4.40E-01	1.55E-02	1.50E+00	4.56E-03	4.27%	6.93%
Silver	0.00E+00	mg/L	2.05E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E+00	0.00E+00	5.44E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.30E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	7.82E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.73E-02	4.76E-03	3.99E-02	NA	NA	NA	NA	NA	NA
Sulfate	1.10E+01	mg/L	4.59E+00	mg/kg	1.30E+02	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	6.26E-01	0.00E+00	7.82E-02	2.59E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.73E-01	4.77E-02	2.70E+01	NA	NA	NA	NA	NA	NA
Thallium	1.00E-03	mg/L	6.22E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00							5.70E-05	0.00E+00	0.00E+00	5.88E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.45E-04	3.50E-01	1.84E-03	1.05E+00	6.14E-04	0.51%	0.93%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.52E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.20E-06	7.33E-07	5.08E-06	2.14E+00	2.38E-06	1.07E+01	4.75E-07	0.00%	0.00%
Vanadium	0.00E+00	mg/L	0.00E+00	mg/kg	1.45E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	0.00E+00	0.00E+00	8.71E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.51E-03	2.63E-04	1.05E-02	1.14E+01	9.19E-04	3.42E+01	3.06E-04	0.25%	0.47%
Zinc	6.50E-02	mg/L	7.78E+01	mg/kg	4.79E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	6.34E+00	7.15E-01	8.84E-01	8.84E-01	1.84E-01	1.84E-01	3.70E-03	0.00E+00	2.89E-02	1.48E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.67E-01	2.92E-02	1.71E+00	1.45E+01	1.18E-01	1.31E+02	1.31E-02	32.38%	19.83%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.1E-05	2.1E-06	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	1.5E-02	1.5E-03	4.03%	2.23%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.4E-03	1.7E-04	0.39%	0.26%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	7.3E-02	2.4E-02	19.96%	36.81%
Aldrin/Dieldrin/Endrin EEQ:	7.0E-04	8.1E-05	0.19%	0.12%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.26	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0.63	unitless
Bird diet fraction =	0.11	unitless
Soil ingestion rate =	0.000678	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.0339	kg/d
Body weight =	1.126	kg
Home range =	1722	acres
Water intake rate =	0.064	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-79
Tier 1 COPCs
EEQs and Hazard Indices for the Deer Mouse at LHAAP
Low Impact Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL		LOAEL		Percent Contribution to	Percent Contribution to
							Unitless	Unitless	Unitless	Unitless	Unitless	Unitless	Unitless	Unitless	Unitless	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	EEQ N	mg/kg-d	EEQ L	EEQ N	EEQ L
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	1.22E-08	mg/L	8.87E-06	mg/kg	3.95E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	3.66E-09	0.00E+00	7.32E-09	0	0.00E+00	4.07E-06	0.00E+00	8.32E-10	0.00E+00	0.00E+00	0.00E+00	4.08E-06	1.00E-06	4.08E+00	1.00E-05	4.08E-01	45.11%	33.27%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.40E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.60E-06	0	0.00E+00	1.01E-03	0.00E+00	5.20E-06	0.00E+00	0.00E+00	0.00E+00	1.02E-03	8.00E-01	1.27E-03	4.00E+00	2.54E-04	0.01%	0.02%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	4.30E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	7.98E-06	0	0.00E+00	3.11E-03	0.00E+00	1.24E-04	0.00E+00	0.00E+00	0.00E+00	3.24E-03	8.00E-01	4.05E-03	4.00E+00	8.11E-04	0.04%	0.07%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.23E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	0.00E+00	4.13E-06	0	0.00E+00	1.66E-03	0.00E+00	8.27E-06	0.00E+00	0.00E+00	0.00E+00	1.68E-03	8.00E-01	2.09E-03	4.00E+00	4.19E-04	0.02%	0.03%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.87E-04	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.47E-07	0	0.00E+00	1.39E-04	0.00E+00	5.88E-08	0.00E+00	0.00E+00	0.00E+00	1.40E-04	2.00E-01	6.99E-04	1.00E+00	1.40E-04	0.01%	0.01%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.76E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	6.98E-07	0	0.00E+00	2.75E-04	0.00E+00	7.03E-07	0.00E+00	0.00E+00	0.00E+00	2.76E-04	4.58E+00	6.03E-05	9.16E+00	3.02E-05	0.00%	0.00%
Aluminum	6.11E+00	mg/L	9.69E+03	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	1.83E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+00	1.93E+00	9.50E-01	1.93E+01	9.50E-02	10.50%	7.75%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	6.37E-01	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	1.18E-03	0	0.00E+00	3.37E-02	0.00E+00	2.07E-03	0.00E+00	0.00E+00	0.00E+00	3.69E-02	1.25E-01	2.95E-01	1.25E+00	2.95E-02	3.26%	2.41%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.07E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	5.69E-06	0	0.00E+00	2.25E-03	0.00E+00	2.32E-05	0.00E+00	0.00E+00	0.00E+00	2.28E-03	6.85E-02	3.33E-02	6.85E-01	3.33E-03	0.37%	0.27%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.42E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.63E-06	0	0.00E+00	1.04E-03	0.00E+00	6.65E-07	0.00E+00	0.00E+00	0.00E+00	1.04E-03	6.80E-02	1.53E-02	6.80E-01	1.53E-03	0.17%	0.13%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.11E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	0.00E+00	7.62E-06	0	0.00E+00	3.09E-03	0.00E+00	1.68E-06	0.00E+00	0.00E+00	0.00E+00	3.10E-03	6.80E-02	4.56E-02	6.80E-01	4.56E-03	0.50%	0.37%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	7.47E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	1.39E-05	0	0.00E+00	5.91E-03	0.00E+00	1.57E-06	0.00E+00	0.00E+00	0.00E+00	5.92E-03	6.80E-02	8.71E-02	6.80E-01	8.71E-03	0.96%	0.71%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.50E-04	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.58E-06	0	0.00E+00	5.52E-04	0.00E+00	2.07E-05	0.00E+00	0.00E+00	0.00E+00	5.74E-04	6.80E-02	8.44E-03	6.80E-01	8.44E-04	0.09%	0.07%
Barium	0.00E+00	mg/L	1.32E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E+00	0.00E+00	1.98E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	6.80E-02	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.26E-04	0	0.00E+00	4.18E-02	0.00E+00	1.01E-02	0.00E+00	0.00E+00	0.00E+00	5.21E-02	4.00E+00	1.30E-02	4.00E+01	1.30E-03	0.14%	0.11%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	2.49E-03	mg/L	5.48E-01	mg/kg	3.84E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.58E+01	8.11E-01	9.52E-01	9.52E-01	9.22E-01	9.22E-01	7.46E-04	0.00E+00	7.12E-04	0	0.00E+00	4.59E-01	0.00E+00	1.69E-02	0.00E+00	0.00E+00	0.00E+00	4.78E-01	1.00E+00	4.78E-01	1.00E+01	4.78E-02	5.28%	3.90%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.88E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.48E-07	0	0.00E+00	1.37E-04	0.00E+00	3.51E-07	0.00E+00	0.00E+00	0.00E+00	1.38E-04	4.58E+00	3.01E-05	9.16E+00	1.50E-05	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.22E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	0.00E+00	0.00E+00	2.27E-02	0	0.00E+00	1.80E+00	0.00E+00	2.72E-01	0.00E+00	0.00E+00	0.00E+00	2.09E+00	3.28E+00	6.37E-01	1.31E+01	1.59E-01	7.05%	12.97%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.59E-07	0	0.00E+00	1.81E-04	0.00E+00	4.63E-07	0.00E+00	0.00E+00	0.00E+00	1.82E-04	4.58E+00	3.97E-05	9.16E+00	1.99E-05	0.00%	0.00%
Copper	1.18E-02	mg/L	7.20E+00	mg/kg	7.43E+00	mg/kg	1.00E+00	5.92E+03	5.25E+00	1.32E+00	5.86E-01	5.75E-01	5.75E-01	1.49E-01	1.49E-01	3.54E-03	0.00E+00	1.38E-02	0	0.00E+00	4.54E-01	0.00E+00	1.98E-01	0.00E+00	0.00E+00	0.00E+00	6.69E-01	1.17E+01	5.72E-02	1.51E+01	4.42E-02	0.63%	3.61%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.86E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.44E-07	0	0.00E+00	1.31E-04	0.00E+00	1.41E-05	0.00E+00	0.00E+00	0.00E+00	1.46E-04	2.00E-02	7.29E-03	2.00E-01	7.29E-04	0.08%	0.06%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.75E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	5.11E-07	0	0.00E+00	1.95E-04	0.00E+00	4.88E-07	0.00E+00	0.00E+00	0.00E+00	1.96E-04	9.20E-02	2.13E-03	9.20E-01	2.13E-04	0.02%	0.02%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.20E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.09E-07	0	0.00E+00	1.59E-04	0.00E+00	1.93E-07	0.00E+00	0.00E+00	0.00E+00	1.59E-04	8.00E-02	1.99E-03	2.90E-01	5.49E-04	0.02%	0.04%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	5.98E+00	mg/L	0.00E+00	mg/kg	1.00E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	1.79E+00	0.00E+00	1.86E+01	0	0.00E+00	3.63E+01	0.00E+00	1.86E+00	0.00E+00	0.00E+00	0.00E+00	5.85E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	5.18E-03	mg/L	0.00E+00	mg/kg	2.51E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	4.39E-01	NA	6.40E-02	6.40E-02	1.33E-02	1.33E-02	1.55E-03	0.00E+00	4.66E-02	0	0.00E+00	5.12E-01	NA	7.46E-02	0.00E+00	0.00E+00	0.00E+00	6.35E-01	8.00E+00	7.93E-02	8.00E+01	7.93E-03	0.88%	0.65%
Manganese	4.54E-01	mg/L	0.00E+00	mg/kg	9.35E+02	mg/kg	1.00E+00	2.00E+03	2.10E+00	2.21E-01	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	1.36E-01	0.00E+00	1.73E+00	0	0.00E+00	9.58E+00	0.00E+00	4.34E+00	0.00E+00	0.00E+00	0.00E+00	1.58E+01	8.80E+01	1.79E-01	2.84E+02	5.56E-02	1.98%	4.53%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.95E-02	mg/kg	1.00E+00		2.87E+00	7.16E+00	NA	1.35E+00	1.35E+00	1.03E-01	1.03E-01	0.00E+00	0.00E+00	1.10E-04	0	0.00E+00	1.98E-02	NA	3.72E-03	0.00E+00	0.00E+00	0.00E+00	2.36E-02	1.32E+01	1.79E-03	3.96E+01	5.96E-04	0.02%	0.05%
Mercury (methyl)	0.00E+00	mg/L	9.58E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.08E+00	NA	NA			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	3.20E-02	0.00E+00	1.60E-01	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.41E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	6.33E-07	0	0.00E+00	2.57E-04	0.00E+00	5.44E-07	0.00E+00	0.00E+00	0.00E+00	2.58E-04	7.00E-02	3.69E-03	7.00E-01	3.69E-04	0.04%	0.03%
Nickel	0.00E+00	mg/L	9.33E+00	mg/kg	7.10E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	6.21E-02	6.65E-02	6.65E-02	1.01E-01	1.01E-01	0.00E+00	0.00E+00	1.32E-02	0	0.00E+00	1.56E+00	0.00E+00	2.19E-02	0.00E+00	0.00E+00	0.00E+00	1.59E+00	4.00E+01	3.98E-02	8.00E+01	1.99E-02	0.44%	1.62%
Nitrate	8.67E-01	mg/L	1.30E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	2.60E-01	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.60E-01	5.07E+02	5.13E-04	1.13E+03	2.30E-04	0.01%	0.02%
Nitrate/Nitrite	7.06E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03								2.12E-02	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.12E-02	5.07E+02	4.18E-05	1.13E+03	1.87E-05	0.00%	0.00%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.26E-07	0	0.00E+00	1.25E-04	0.00E+00	2.15E-07	0.00E+00	0.00E+00	0.00E+00	1.25E-04	4.58E+00	2.73E-05	9.16E+00	1.37E-05	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	8.83E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.64E-06	0	0.00E+00	6.22E-04	0.00E+00	1.37E-06	0.00E+00	0.00E+00	0.00E+00	6.25E-04	2.40E-01	2.60E-03	2.40E+00	2.60E-04	0.03%	0.02%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	4.23E-01	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	7.84E-04	0	0.00E+00	2.91E-01	0.00E+00	1.38E-03	0.00E+00	0.00E+00	0.00E+00	2.93E-01	2.40E-01	1.22E+00	2.40E+00	1.22E-01	13.51%	9.96%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.80E-01	mg/kg	1.00E+00			1.14E+00	NA	1.88E+01	1.88E+01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	5.19E-04	0	0.00E+00	1.48E-02	NA	2.44E-01	0.00E+00	0.00E+00	0.00E+00	2.59E-01	8.50E+00	3.05E-02	2.55E+01	1.02E-02	0.34%	0.83%
Selenium	0.00E+00	mg/L	8.67E-01	mg/kg	4.13E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.18E+00	4.99E-01	4.64E-01	4.64E-01	1.95E-01	1.95E-01	0.00E+00	0.00E+00	7.65E-04	0	0.00E+00	2.25E-02	0.00E+00	8.87E-03	0.00E+00	0.00E+00	0.00E+00	3.22E-02	2.00E-01	1.61E-01	3.30E-01	9.75E-02	1.78%	7.95%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	2.65E-02	0	0.00E+00	1.84E-01	0.00E+00	2.32E-01	0.00E+00	0.00E+00	0.00E+00	4.42E-01	2.63E+02	1.68E-03	7.89E+02	5.60E-04	0.02%	0.05%
Sulfate	6.09E+00	mg/L	2.00E+01	mg/kg	2.30E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	1.83E+00	0.00E+00	4.27E-01	0	0.00E+00	1.22E+01	0.00E+00	3.73E+00	0.00E+00	0.00E+00	0.00E+00	1.81E+01	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	7.12E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00							0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.40E-03	0.00E+00	7.40E-02	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.04E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	5.63E-07	0	0.00E+00	2.22E-04	0.00E+00	5.67E-07	0.00E+00	0.00E+00	0.00E+00	2.23E-04	4.58E+00	4.87E-05	9.16E+00	2.43E-05	0.00%	0.00%
Vanadium	3.33E-02	mg/L	0.00E+00	mg/kg	1.53E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	9.99E-03	0.00E+00	2.84E-02	0	0.00E+00	6.26E-02	0.00E+00	2.84E-03	0.00E+00	0.00E+00	0.00E+00	1.04E-01	2.10E-01	4.95E-01	2.10E+00	4.95E-02	5.47%	4.03%
Zinc	0.00E+00	mg/L	3.82E+01	mg/kg	5.89E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.53E+00	9.78E-01	8.08E-01	8.08E-01	4.51E-01	4.51E-01	0.00E+00	0.00E+00	1.09E-01	0	0.00E+00	1.51E+01	0.00E+00	2.21E+00	0.00E+00	0.00E+00	0.00E+00	1.74E+01	1.60E+02	1.09E-01	3.20E+02	5.44E-02	1.20%	4.43%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	2.1E-04	1.0E-04	0.00%	0.01%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	7.4E-03	1.5E-03	0.08%	0.12%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.9E-01	1.9E-02	2.10%	1.55%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	1.0E-02	1.1E-03	0.11%	0.09%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\, x\, Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0.5	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0.5	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	4.08E-05	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.00204	kg/d
Body weight =	0.022	kg
Home range =	0.034595	acres
Water intake rate =	0.0066	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-80
Tier 2 COPCs
EEQs and Hazard Indices for the Deer Mouse at LHAAP
Low Impact Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
									-----Unitless-----							mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	1.07E-08	mg/L	5.59E-06	mg/kg	3.18E-06	mg/kg	#######	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	3.20E-09	0.00E+00	5.90E-09	0	0.00E+00	1.62E-06	0.00E+00	5.72E-10	0.00E+00	0.00E+00	0.00E+00	1.63E-06	1.00E-06	1.63E+00	1.00E-05	1.63E-01	38.89%	26.31%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	8.00E-04	mg/kg	#######		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.48E-06	0	0.00E+00	3.32E-04	0.00E+00	1.04E-06	0.00E+00	0.00E+00	0.00E+00	3.35E-04	8.00E-01	4.18E-04	4.00E+00	8.37E-05	0.01%	0.01%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	3.10E-03	mg/kg	#######		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	5.75E-06	0	0.00E+00	1.29E-03	0.00E+00	1.95E-05	0.00E+00	0.00E+00	0.00E+00	1.32E-03	8.00E-01	1.65E-03	4.00E+00	3.30E-04	0.04%	0.05%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.07E-03	mg/kg	#######		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	1.98E-06	0	0.00E+00	4.59E-04	0.00E+00	1.39E-06	0.00E+00	0.00E+00	0.00E+00	4.63E-04	8.00E-01	5.79E-04	4.00E+00	1.16E-04	0.01%	0.02%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	#######			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.27E-07	0	0.00E+00	7.56E-05	0.00E+00	3.97E-08	0.00E+00	0.00E+00	0.00E+00	7.60E-05	2.00E-01	3.80E-04	1.00E+00	7.60E-05	0.01%	0.01%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.15E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	5.84E-07	0	0.00E+00	1.33E-04	0.00E+00	1.36E-07	0.00E+00	0.00E+00	0.00E+00	1.34E-04	4.58E+00	2.92E-05	9.16E+00	1.46E-05	0.00%	0.00%
Aluminum	4.16E+00	mg/L	8.09E+03	mg/kg	0.00E+00	mg/kg	#######	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	1.25E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E+00	1.93E+00	6.46E-01	1.93E+01	6.46E-02	15.37%	10.40%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-01	mg/kg	#######			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	9.45E-04	0	0.00E+00	7.08E-03	0.00E+00	8.74E-04	0.00E+00	0.00E+00	0.00E+00	8.90E-03	1.25E-01	7.12E-02	1.25E+00	7.12E-03	1.69%	1.15%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.55E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.73E-06	0	0.00E+00	1.08E-03	0.00E+00	9.92E-07	0.00E+00	0.00E+00	0.00E+00	1.08E-03	6.85E-02	1.58E-02	6.85E-01	1.58E-03	0.38%	0.25%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.21E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.24E-06	0	0.00E+00	5.11E-04	0.00E+00	4.70E-07	0.00E+00	0.00E+00	0.00E+00	5.13E-04	6.80E-02	7.55E-03	6.80E-01	7.55E-04	0.18%	0.12%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	3.32E-03	mg/kg	#######		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	6.15E-06	0	0.00E+00	1.44E-03	0.00E+00	5.50E-07	0.00E+00	0.00E+00	0.00E+00	1.44E-03	6.80E-02	2.12E-02	6.80E-01	2.12E-03	0.51%	0.34%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	4.07E-03	mg/kg	#######			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	7.55E-06	0	0.00E+00	1.86E-03	0.00E+00	1.21E-07	0.00E+00	0.00E+00	0.00E+00	1.86E-03	6.80E-02	2.74E-02	6.80E-01	2.74E-03	0.65%	0.44%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	7.92E-04	mg/kg	#######			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.47E-06	0	0.00E+00	2.97E-04	0.00E+00	1.93E-05	0.00E+00	0.00E+00	0.00E+00	3.17E-04	6.80E-02	4.67E-03	6.80E-01	4.67E-04	0.11%	0.08%
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	0.00E+00	mg/kg	#######	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E+00	0.00E+00	1.98E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	5.10E-02	mg/kg	#######			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	9.46E-05	0	0.00E+00	1.81E-02	0.00E+00	7.60E-03	0.00E+00	0.00E+00	0.00E+00	2.58E-02	4.00E+00	6.45E-03	4.00E+01	6.45E-04	0.15%	0.10%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	2.09E-03	mg/L	4.57E-01	mg/kg	3.02E-01	mg/kg	#######	1.15E+03	6.00E-01	2.87E+01	8.80E-01	1.06E+00	1.06E+00	6.72E-01	6.72E-01	6.26E-04	0.00E+00	5.61E-04	0	0.00E+00	4.03E-01	0.00E+00	1.49E-02	0.00E+00	0.00E+00	0.00E+00	4.19E-01	1.00E+00	4.19E-01	1.00E+01	4.19E-02	9.97%	6.74%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.21E-07	0	0.00E+00	7.29E-05	0.00E+00	7.48E-08	0.00E+00	0.00E+00	0.00E+00	7.33E-05	4.58E+00	1.60E-05	9.16E+00	8.00E-06	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E+01	mg/kg	#######	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	0.00E+00	0.00E+00	2.04E-02	0	0.00E+00	1.56E-01	0.00E+00	2.10E-02	0.00E+00	0.00E+00	0.00E+00	1.98E-01	3.28E+00	6.03E-02	1.31E+01	1.51E-02	1.43%	2.42%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.93E-07	0	0.00E+00	8.93E-05	0.00E+00	9.17E-08	0.00E+00	0.00E+00	0.00E+00	8.98E-05	4.58E+00	1.96E-05	9.16E+00	9.81E-06	0.00%	0.00%
Copper	9.31E-03	mg/L	6.17E+00	mg/kg	6.53E+00	mg/kg	#######	1.11E+03	1.56E+00	1.45E+00	6.44E-01	6.22E-01	6.22E-01	8.97E-02	8.97E-02	2.79E-03	0.00E+00	1.21E-02	0	0.00E+00	4.40E-01	0.00E+00	1.88E-01	0.00E+00	0.00E+00	0.00E+00	6.43E-01	1.17E+01	5.50E-02	1.51E+01	4.25E-02	1.31%	6.84%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.72E-04	mg/kg	#######		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.19E-07	0	0.00E+00	7.02E-05	0.00E+00	1.91E-07	0.00E+00	0.00E+00	0.00E+00	7.07E-05	2.00E-02	3.53E-03	2.00E-01	3.53E-04	0.08%	0.06%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-04	mg/kg	#######			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	4.41E-07	0	0.00E+00	9.71E-05	0.00E+00	3.02E-07	0.00E+00	0.00E+00	0.00E+00	9.78E-05	9.20E-02	1.06E-03	9.20E-01	1.06E-04	0.03%	0.02%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.93E-04	mg/kg	#######			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.58E-07	0	0.00E+00	8.01E-05	0.00E+00	1.42E-07	0.00E+00	0.00E+00	0.00E+00	8.06E-05	8.00E-02	1.01E-03	2.90E-01	2.78E-04	0.02%	0.04%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	4.18E+00	mg/L	0.00E+00	mg/kg	9.10E+03	mg/kg	#######	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	1.25E+00	0.00E+00	1.69E+01	0	0.00E+00	1.52E+01	0.00E+00	1.69E+00	0.00E+00	0.00E+00	0.00E+00	3.50E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	#######		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	4.09E-03	mg/L	0.00E+00	mg/kg	2.21E+01	mg/kg	#######	4.48E+02	7.10E-02	4.50E-01	NA	6.78E-02	6.78E-02	1.16E-02	1.16E-02	1.23E-03	0.00E+00	4.09E-02	0	0.00E+00	4.61E-01	NA	6.94E-02	0.00E+00	0.00E+00	0.00E+00	5.72E-01	8.00E+00	7.16E-02	8.00E+01	7.16E-03	1.70%	1.15%
Manganese	3.17E-01	mg/L	0.00E+00	mg/kg	8.30E+02	mg/kg	#######	2.50E+02	4.20E-01	2.26E-01	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	9.50E-02	0.00E+00	1.54E+00	0	0.00E+00	8.70E+00	0.00E+00	3.04E+00	0.00E+00	0.00E+00	0.00E+00	1.34E+01	8.80E+01	1.52E-01	2.84E+02	4.71E-02	3.61%	7.58%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-02	mg/kg	#######		1.14E+00	7.64E+00	NA	1.41E+00	1.41E+00	9.15E-02	9.15E-02	0.00E+00	0.00E+00	1.00E-04	0	0.00E+00	1.91E-02	NA	3.53E-03	0.00E+00	0.00E+00	0.00E+00	2.28E-02	1.32E+01	1.72E-03	3.96E+01	5.75E-04	0.04%	0.09%
Mercury (methyl)	0.00E+00	mg/L	8.35E-02	mg/kg	0.00E+00	mg/kg	#######		1.14E+00	NA	1.15E+00	NA	NA			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	3.20E-02	0.00E+00	1.60E-01	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.88E-04	mg/kg	#######			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	5.35E-07	0	0.00E+00	1.25E-04	0.00E+00	4.60E-08	0.00E+00	0.00E+00	0.00E+00	1.26E-04	7.00E-02	1.80E-03	7.00E-01	1.80E-04	0.04%	0.03%
Nickel	0.00E+00	mg/L	8.12E+00	mg/kg	6.36E+00	mg/kg	#######		4.86E-01	1.06E+00	6.43E-02	6.84E-02	6.84E-02	8.71E-02	8.71E-02	0.00E+00	0.00E+00	1.18E-02	0	0.00E+00	3.12E-01	0.00E+00	2.02E-02	0.00E+00	0.00E+00	0.00E+00	3.44E-01	4.00E+01	8.60E-03	8.00E+01	4.30E-03	0.20%	0.69%
Nitrate	4.79E-01	mg/L	9.50E-02	mg/kg	0.00E+00	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	1.44E-01	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.44E-01	5.07E+02	2.83E-04	1.13E+03	1.27E-04	0.01%	0.02%
Nitrate/Nitrite	5.55E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	3.01E+02								1.67E-02	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.67E-02	5.07E+02	3.28E-05	1.13E+03	1.47E-05	0.00%	0.00%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E-04	mg/kg	#######			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.16E-07	0	0.00E+00	6.97E-05	0.00E+00	2.08E-07	0.00E+00	0.00E+00	0.00E+00	7.02E-05	4.58E+00	1.53E-05	9.16E+00	7.67E-06	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.62E-04	mg/kg	#######			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.04E-06	0	0.00E+00	2.28E-04	0.00E+00	7.14E-07	0.00E+00	0.00E+00	0.00E+00	2.30E-04	2.40E-01	9.57E-04	2.40E+00	9.57E-05	0.02%	0.02%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-01	mg/kg	#######			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.59E-04	0	0.00E+00	9.83E-02	0.00E+00	4.88E-04	0.00E+00	0.00E+00	0.00E+00	9.92E-02	2.40E-01	4.13E-01	2.40E+00	4.13E-02	9.84%	6.65%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	7.70E-02	mg/kg	#######			3.00E-01	NA	3.19E+01	3.19E+01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	1.43E-04	0	0.00E+00	1.07E-03	NA	1.14E-01	0.00E+00	0.00E+00	0.00E+00	1.15E-01	8.50E+00	1.36E-02	2.55E+01	4.52E-03	0.32%	0.73%
Selenium	0.00E+00	mg/L	7.51E-01	mg/kg	3.74E-01	mg/kg	#######	2.05E+02	4.50E+00	1.21E+00	4.92E-01	4.59E-01	4.59E-01	1.51E-01	1.51E-01	0.00E+00	0.00E+00	6.93E-04	0	0.00E+00	2.10E-02	0.00E+00	7.95E-03	0.00E+00	0.00E+00	0.00E+00	2.96E-02	2.00E-01	1.48E-01	3.30E-01	8.97E-02	3.52%	14.44%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.30E+01	mg/kg	#######		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	2.41E-02	0	0.00E+00	5.24E-02	0.00E+00	1.26E-01	0.00E+00	0.00E+00	0.00E+00	2.03E-01	2.63E+02	7.72E-04	7.89E+02	2.57E-04	0.02%	0.04%
Sulfate	5.14E+00	mg/L	1.39E+01	mg/kg	1.30E+02	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	1.54E+00	0.00E+00	2.41E-01	0	0.00E+00	1.81E+00	0.00E+00	1.27E+00	0.00E+00	0.00E+00	0.00E+00	4.86E+00	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	6.14E-01	mg/kg	0.00E+00	mg/kg	#######	7.50E+01	4.50E+00							0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.40E-03	0.00E+00	7.40E-02	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.69E-07	0	0.00E+00	1.06E-04	0.00E+00	1.09E-07	0.00E+00	0.00E+00	0.00E+00	1.07E-04	4.58E+00	2.34E-05	9.16E+00	1.17E-05	0.00%	0.00%
Vanadium	2.64E-02	mg/L	0.00E+00	mg/kg	1.45E+01	mg/kg	#######	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	7.92E-03	0.00E+00	2.68E-02	0	0.00E+00	2.82E-02	0.00E+00	2.42E-03	0.00E+00	0.00E+00	0.00E+00	6.53E-02	2.10E-01	3.11E-01	2.10E+00	3.11E-02	7.40%	5.01%
Zinc	0.00E+00	mg/L	3.22E+01	mg/kg	4.79E+01	mg/kg	#######	2.91E+03	1.94E+00	6.34E+00	1.05E+00	8.84E-01	8.84E-01	1.84E-01	1.84E-01	0.00E+00	0.00E+00	8.89E-02	0	0.00E+00	1.41E+01	0.00E+00	1.97E+00	0.00E+00	0.00E+00	0.00E+00	1.62E+01	1.60E+02	1.01E-01	3.20E+02	5.05E-02	2.40%	8.12%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.0E-04	5.2E-05	0.00%	0.01%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	2.6E-03	5.3E-04	0.06%	0.09%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	7.7E-02	7.7E-03	1.82%	1.23%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	5.0E-03	5.4E-04	0.12%	0.09%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi \, x \, Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0.5	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0.5	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.0000408	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.00204	kg/d
Body weight =	0.022	kg
Home range =	0.1457916	acres
Water intake rate =	0.0066	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-81
Tier 1 COPCs
EEQs and Hazard Indices for the Raccoon at LHAAP
Low Impact Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
							---Unitless---								
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00
2,3,7,8-TCDD TEQ	1.22E-08	mg/L	8.87E-06	mg/kg	3.95E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.40E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	4.30E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.23E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.87E-04	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.76E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Aluminum	6.11E+00	mg/L	9.69E+03	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	6.37E-01	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.07E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.42E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.11E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	7.47E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.50E-04	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00
Barium	0.00E+00	mg/L	1.32E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	6.80E-02	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00
Cadmium	2.49E-03	mg/L	5.48E-01	mg/kg	3.84E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.58E+01	8.11E-01	9.52E-01	9.52E-01	9.22E-01	9.22E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.88E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.22E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Copper	1.18E-02	mg/L	7.20E+00	mg/kg	7.43E+00	mg/kg	1.00E+00	5.92E+03	5.25E+00	1.32E+00	5.86E-01	5.75E-01	5.75E-01	1.49E-01	1.49E-01
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.86E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.75E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.20E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00
Iron	5.98E+00	mg/L	0.00E+00	mg/kg	1.00E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01		
Lead	5.18E-03	mg/L	0.00E+00	mg/kg	2.51E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	4.39E-01	NA	6.40E-02	6.40E-02	1.33E-02	1.33E-02
Manganese	4.54E-01	mg/L	0.00E+00	mg/kg	9.35E+02	mg/kg	1.00E+00	2.00E+03	2.10E+00	2.21E-01	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.95E-02	mg/kg	1.00E+00		2.87E+00	7.16E+00	NA	1.35E+00	1.35E+00	1.03E-01	1.03E-01
Mercury (methyl)	0.00E+00	mg/L	9.58E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.08E+00	NA	NA		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.41E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00
Nickel	0.00E+00	mg/L	9.33E+00	mg/kg	7.10E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	6.21E-02	6.65E-02	6.65E-02	1.01E-01	1.01E-01
Nitrate	8.67E-01	mg/L	1.30E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Nitrate/Nitrite	7.06E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	8.83E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	4.23E-01	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.80E-01	mg/kg	1.00E+00			1.14E+00	NA	1.88E+01	1.88E+01	1.66E-01	1.66E-01
Selenium	0.00E+00	mg/L	8.67E-01	mg/kg	4.13E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.18E+00	4.99E-01	4.64E-01	4.64E-01	1.95E-01	1.95E-01
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Sulfate	6.09E+00	mg/L	2.00E+01	mg/kg	2.30E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Thallium	0.00E+00	mg/L	7.12E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.04E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Vanadium	3.33E-02	mg/L	0.00E+00	mg/kg	1.53E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03
Zinc	0.00E+00	mg/L	3.82E+01	mg/kg	5.89E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.53E+00	9.78E-01	8.08E-01	8.08E-01	4.51E-01	4.51E-01

Chemical	EED Surface Water (mg/kg-d)	EED Sediment (mg/kg-d)	EED Soil (mg/kg-d)	EED Fish (mg/kg-d)	EED Aq. Invert. (mg/kg-d)	EED Terr. Invert. (mg/kg-d)	EED Aq. Plants (mg/kg-d)	EED Terr. Plants (mg/kg-d)	EED Plant Roots (mg/kg-d)	EED Mammals (mg/kg-d)	EED Birds (mg/kg-d)	Total EED (mg/kg-d)	NOAEL (mg/kg-d)	EEQ N	LOAEL (mg/kg-d)	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	1.00E-09	2.09E-08	9.31E-09	5.203E-06	1.46E-06	6.60E-07	0.00E+00	5.40E-10	0.00E+00	6.03E-10	0.00E+00	7.36E-06	1.00E-06	7.36E+00	1.00E-05	7.36E-01	3.75%	3.67%
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	0.00E+00	3.30E-06	0	0.00E+00	1.64E-04	0.00E+00	3.37E-06	0.00E+00	4.05E-06	0.00E+00	1.74E-04	8.00E-01	2.18E-04	4.00E+00	4.36E-05	0.00%	0.00%
4,4'-DDE	0.00E+00	0.00E+00	1.01E-05	0	0.00E+00	5.05E-04	0.00E+00	8.03E-05	0.00E+00	1.07E-05	0.00E+00	6.06E-04	8.00E-01	7.58E-04	4.00E+00	1.52E-04	0.00%	0.00%
4,4'-DDT	0.00E+00	0.00E+00	5.26E-06	0	0.00E+00	2.70E-04	0.00E+00	5.37E-06	0.00E+00	9.30E-06	0.00E+00	2.90E-04	8.00E-01	3.62E-04	4.00E+00	7.25E-05	0.00%	0.00%
Aldrin	0.00E+00	0.00E+00	4.41E-07	0	0.00E+00	2.26E-05	0.00E+00	3.82E-08	0.00E+00	5.41E-07	0.00E+00	2.36E-05	2.00E-01	1.18E-04	1.00E+00	2.36E-05	0.00%	0.00%
alpha-Chlordane	0.00E+00	0.00E+00	8.87E-07	0	0.00E+00	4.46E-05	0.00E+00	4.57E-07	0.00E+00	1.09E-06	0.00E+00	4.71E-05	4.58E+00	1.03E-05	9.16E+00	5.14E-06	0.00%	0.00%
Aluminum	5.03E-01	2.29E+01	0.00E+00	0.0659218	3.28E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.52E+02	1.93E+00	1.82E+02	1.93E+01	1.82E+01	93.01%	90.95%
Antimony	0.00E+00	0.00E+00	1.50E-03	0	0.00E+00	5.46E-03	0.00E+00	1.34E-03	0.00E+00	2.66E-04	0.00E+00	8.57E-03	1.25E-01	6.86E-02	1.25E+00	6.86E-03	0.04%	0.03%
Aroclor 1242	0.00E+00	0.00E+00	7.24E-06	0	0.00E+00	3.65E-04	0.00E+00	1.51E-05	0.00E+00	8.87E-06	0.00E+00	3.96E-04	6.85E-02	5.79E-03	6.85E-01	5.79E-04	0.00%	0.00%
Aroclor 1248	0.00E+00	0.00E+00	3.35E-06	0	0.00E+00	1.69E-04	0.00E+00	4.32E-07	0.00E+00	4.10E-06	0.00E+00	1.77E-04	6.80E-02	2.60E-03	6.90E-01	2.56E-04	0.00%	0.00%
Aroclor 1254	0.00E+00	0.00E+00	9.69E-06	0	0.00E+00	5.01E-04	0.00E+00	1.09E-06	0.00E+00	1.09E-05	0.00E+00	5.23E-04	6.80E-02	7.69E-03	6.90E-01	7.58E-04	0.00%	0.00%
Aroclor 1260	0.00E+00	0.00E+00	1.76E-05	0	0.00E+00	9.59E-04	0.00E+00	1.02E-06	0.00E+00	3.60E-05	0.00E+00	1.01E-03	6.80E-02	1.49E-02	6.90E-01	1.47E-03	0.01%	0.01%
Aroclor 1268	0.00E+00	0.00E+00	2.01E-06	0	0.00E+00	8.96E-05	0.00E+00	1.35E-05	0.00E+00	2.46E-06	0.00E+00	1.08E-04	6.80E-02	1.58E-03	6.90E-01	1.56E-04	0.00%	0.00%
Barium	0.00E+00	3.12E-01	0.00E+00	0	4.48E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.79E+00	5.10E+00	9.40E-01	1.98E+01	2.42E-01	0.48%	1.21%
Benzoic Acid	0.00E+00	0.00E+00	1.60E-04	0	0.00E+00	6.79E-03	0.00E+00	6.58E-03	0.00E+00	1.97E-04	0.00E+00	1.37E-02	4.00E+00	3.43E-03	4.00E+01	3.43E-04	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	2.05E-04	1.29E-03	9.05E-04	0.0101703	3.29E-02	7.46E-02	0.00E+00	1.10E-02	0.00E+00	8.88E-04	0.00E+00	1.32E-01	1.00E+00	1.32E-01	1.00E+01	1.32E-02	0.07%	0.07%
Chlordane	0.00E+00	0.00E+00	4.42E-07	0	0.00E+00	2.22E-05	0.00E+00	2.28E-07	0.00E+00	5.42E-07	0.00E+00	2.35E-05	4.58E+00	5.12E-06	9.16E+00	2.56E-06	0.00%	0.00%
Chromium	0.00E+00	0.00E+00	2.89E-02	0	0.00E+00	2.91E-01	0.00E+00	1.77E-01	0.00E+00	1.02E-02	0.00E+00	5.07E-01	3.28E+00	1.55E-01	1.31E+01	3.86E-02	0.08%	0.19%
cis-Nonachlor	0.00E+00	0.00E+00	5.84E-07	0	0.00E+00	2.94E-05	0.00E+00	3.01E-07	0.00E+00	7.16E-07	0.00E+00	3.10E-05	4.58E+00	6.76E-06	9.16E+00	3.38E-06	0.00%	0.00%
Copper	9.72E-04	1.70E-02	1.75E-02	0.175209	2.84E-01	7.37E-02	0.00E+00	1.29E-01	0.00E+00	2.79E-03	0.00E+00	7.00E-01	1.17E+01	5.99E-02	1.51E+01	4.63E-02	0.03%	0.23%
Dieldrin	0.00E+00	0.00E+00	4.38E-07	0	0.00E+00	2.13E-05	0.00E+00	9.16E-06	0.00E+00	5.37E-07	0.00E+00	3.15E-05	2.00E-02	1.57E-03	2.00E-01	1.57E-04	0.00%	0.00%
Endrin	0.00E+00	0.00E+00	6.49E-07	0	0.00E+00	3.16E-05	0.00E+00	3.17E-07	0.00E+00	8.40E-07	0.00E+00	3.34E-05	9.20E-02	3.64E-04	9.20E-01	3.64E-05	0.00%	0.00%
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	0.00E+00	5.20E-07	0	0.00E+00	2.57E-05	0.00E+00	1.25E-07	0.00E+00	6.37E-07	0.00E+00	2.70E-05	8.00E-02	3.38E-04	2.90E-01	9.32E-05	0.00%	0.00%
HMX	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	4.92E-01	0.00E+00	2.37E+01	14.993368	0.00E+00	5.89E+00	0.00E+00	1.21E+00	0.00E+00	5.21E-02	0.00E+00	4.63E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	1.44E-04	0.00E+00	0	1.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.02E-02	NA	NA	NA	NA	NA	NA
Lead	4.27E-04	0.00E+00	5.93E-02	0.0194922	0.00E+00	8.31E-02	NA	4.84E-02	0.00E+00	8.39E-04	0.00E+00	2.12E-01	8.00E+00	2.64E-02	8.00E+01	2.64E-03	0.01%	0.01%
Manganese	3.74E-02	0.00E+00	2.21E+00	2.2798057	0.00E+00	1.56E+00	0.00E+00	2.82E+00	0.00E+00	2.25E-02	0.00E+00	8.92E+00	8.80E+01	1.01E-01	2.84E+02	3.14E-02	0.05%	0.16%
Mercury (inorganic)	0.00E+00	0.00E+00	1.40E-04	0	0.00E+00	3.21E-03	NA	2.41E-03	0.00E+00	1.54E-05	0.00E+00	5.78E-03	1.00E+00	5.78E-03	3.00E+00	1.93E-03	0.00%	0.01%
Mercury (methyl)	0.00E+00	2.26E-04	0.00E+00	0	2.07E-03	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	2.29E-03	1.50E-02	1.53E-01	2.50E-02	9.17E-02	0.08%	0.46%
Mirex	0.00E+00	0.00E+00	8.05E-07	0	0.00E+00	4.17E-05	0.00E+00	3.53E-07	0.00E+00	9.87E-07	0.00E+00	4.38E-05	7.00E-02	6.26E-04	7.00E-01	6.26E-05	0.00%	0.00%
Nickel	0.00E+00	2.20E-02	1.68E-02	0	1.63E-01	2.53E-01	0.00E+00	1.42E-02	0.00E+00	1.80E-03	0.00E+00	4.71E-01	4.00E+01	1.18E-02	8.00E+01	5.88E-03	0.01%	0.03%
Nitrate	7.14E-02	3.06E-04	0.00E+00	2.3232753	2.05E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E+00	5.07E+02	4.73E-03	1.13E+03	2.12E-03	0.00%	0.01%
Nitrate/Nitrite	5.82E-03	0.00E+00	0.00E+00	0.1891617	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.95E-01	5.07E+02	3.85E-04	1.13E+03	1.73E-04	0.00%	0.00%
Oxychlordane	0.00E+00	0.00E+00	4.15E-07	0	0.00E+00	2.02E-05	0.00E+00	1.39E-07	0.00E+00	5.08E-07	0.00E+00	2.13E-05	4.58E+00	4.65E-06	9.16E+00	2.32E-06	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	0.00E+00	2.08E-06	0	0.00E+00	1.01E-04	0.00E+00	8.90E-07	0.00E+00	2.55E-06	0.00E+00	1.06E-04	2.40E-01	4.43E-04	2.40E+00	4.43E-05	0.00%	0.00%
Pentachlorophenol	0.00E+00	0.00E+00	9.97E-04	0	0.00E+00	4.72E-02	0.00E+00	8.97E-04	0.00E+00	1.22E-03	0.00E+00	5.04E-02	2.40E-01	2.10E-01	2.40E+00	2.10E-02	0.11%	0.10%
Perchlorate	0.00E+00	0.00E+00	6.60E-04	0	0.00E+00	2.40E-03	NA	1.58E-01	0.00E+00	1.17E-04	0.00E+00	1.62E-01	8.50E+00	1.90E-02	2.55E+01	6.33E-03	0.01%	0.03%
Selenium	0.00E+00	2.04E-03	9.73E-04	0	2.93E-02	3.66E-03	0.00E+00	5.76E-03	0.00E+00	2.02E-04	0.00E+00	4.20E-02	2.00E-01	2.10E-01	3.30E-01	1.27E-01	0.11%	0.63%
Silver	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	0.00E+00	3.37E-02	0	0.00E+00	2.99E-02	0.00E+00	1.50E-01	0.00E+00	5.95E-03	0.00E+00	2.20E-01	2.63E+02	8.36E-04	7.89E+02	2.79E-04	0.00%	0.00%
Sulfate	5.02E-01	4.71E-02	5.42E-01	16.31886	3.15E-01	1.97E+00	0.00E+00	2.42E+00	0.00E+00	9.59E-02	0.00E+00	2.22E+01	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	1.68E-03	0.00E+00	0	2.41E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.58E-02	7.40E-03	3.48E+00	7.40E-02	3.48E-01	1.78%	1.74%
trans-Nonachlor	0.00E+00	0.00E+00	7.16E-07	0	0.00E+00	3.60E-05	0.00E+00	3.68E-07	0.00E+00	8.77E-07	0.00E+00	3.80E-05	4.58E+00	8.29E-06	9.16E+00	4.14E-06	0.00%	0.00%
Vanadium	2.74E-03	0.00E+00	3.62E-02	0.0892196	0.00E+00	1.02E-02	0.00E+00	1.85E-03	0.00E+00	2.28E-04	0.00E+00	1.40E-01	2.10E-01	6.68E-01	2.10E+00	6.68E-02	0.34%	0.33%
Zinc	0.00E+00	9.00E-02	1.39E-01	0	2.16E+00	2.45E+00	0.00E+00	1.43E+00	0.00E+00	6.66E-02	0.00E+00	6.34E+00	1.60E+02	3.96E-02	3.20E+02	1.98E-02	0.02%	0.10%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	3.5E-05	1.8E-05	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	1.3E-03	2.7E-04	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	3.3E-02	3.2E-03	0.02%	0.02%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	2.1E-03	2.2E-04	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\,x\,Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text tables.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0.6	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.05	unitless
Aq. Invert diet fraction =	0.15	unitless
Terr. Invert diet fraction =	0.15	unitless
Mammal diet fraction =	0.05	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.01363	kg/d
Sediment ingestion rate =	0.01363	kg/d
Food ingestion rate =	0.29	kg/d
Body weight =	5.78	kg
Home range =	13.09653	acres
Water intake rate =	0.476	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-82
Tier 2 COPCs
EEQs and Hazard Indices for the Raccoon at LHAAP
Low Impact Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL		LOAEL		Percent Contribution to	Percent Contribution to
									----------Unitless----------							mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	EEQ N	mg/kg-d	EEQ L	EEQ N	EEQ L
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	1.07E-08	mg/L	5.59E-06	mg/kg	3.18E-06	mg/kg	#######	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	8.79E-10	1.32E-08	7.51E-09	6.18E-07	1.96E-07	2.64E-07	0.00E+00	3.71E-10	0.00E+00	3.77E-10	0.00E+00	1.10E-06	1.00E-06	1.10E+00	1.00E-05	1.10E-01	0.70%	0.68%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	8.00E-04	mg/kg	#######		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.89E-06	0	0.00E+00	5.39E-05	0.00E+00	6.75E-07	0.00E+00	1.76E-06	0.00E+00	5.82E-05	8.00E-01	7.28E-05	4.00E+00	1.46E-05	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	3.10E-03	mg/kg	#######		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	7.31E-06	0	0.00E+00	2.10E-04	0.00E+00	1.27E-05	0.00E+00	7.33E-06	0.00E+00	2.37E-04	8.00E-01	2.97E-04	4.00E+00	5.93E-05	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.07E-03	mg/kg	#######		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	2.52E-06	0	0.00E+00	7.46E-05	0.00E+00	9.00E-07	0.00E+00	2.38E-06	0.00E+00	8.04E-05	8.00E-01	1.00E-04	4.00E+00	2.01E-05	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	#######			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.15E-07	0	0.00E+00	1.23E-05	0.00E+00	2.58E-08	0.00E+00	3.87E-07	0.00E+00	1.31E-05	2.00E-01	6.55E-05	1.00E+00	1.31E-05	0.00%	0.00%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.15E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	7.43E-07	0	0.00E+00	2.16E-05	0.00E+00	8.85E-08	0.00E+00	6.93E-07	0.00E+00	2.31E-05	4.58E+00	5.04E-06	9.16E+00	2.52E-06	0.00%	0.00%
Aluminum	4.16E+00	mg/L	8.09E+03	mg/kg	0.00E+00	mg/kg	#######	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	3.42E-01	1.91E+01	0.00E+00	0.0448268	2.74E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.93E+02	1.93E+00	1.52E+02	1.93E+01	1.52E+01	96.29%	94.45%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-01	mg/kg	#######			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	1.20E-03	0	0.00E+00	1.15E-03	0.00E+00	5.67E-04	0.00E+00	1.42E-04	0.00E+00	3.06E-03	1.25E-01	2.45E-02	1.25E+00	2.45E-03	0.02%	0.02%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.55E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	6.02E-06	0	0.00E+00	1.75E-04	0.00E+00	6.44E-07	0.00E+00	5.61E-06	0.00E+00	1.87E-04	6.85E-02	2.73E-03	6.85E-01	2.73E-04	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.21E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.85E-06	0	0.00E+00	8.29E-05	0.00E+00	3.05E-07	0.00E+00	2.66E-06	0.00E+00	8.87E-05	6.80E-02	1.30E-03	6.90E-01	1.29E-04	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	3.32E-03	mg/kg	#######		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	7.82E-06	0	0.00E+00	2.33E-04	0.00E+00	3.57E-07	0.00E+00	4.14E-06	0.00E+00	2.46E-04	6.80E-02	3.61E-03	6.90E-01	3.56E-04	0.00%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	4.07E-03	mg/kg	#######			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	9.60E-06	0	0.00E+00	3.01E-04	0.00E+00	7.88E-08	0.00E+00	1.71E-05	0.00E+00	3.28E-04	6.80E-02	4.82E-03	6.90E-01	4.75E-04	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	7.92E-04	mg/kg	#######			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.87E-06	0	0.00E+00	4.81E-05	0.00E+00	1.26E-05	0.00E+00	1.74E-06	0.00E+00	6.43E-05	6.80E-02	9.46E-04	6.90E-01	9.32E-05	0.00%	0.00%
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	0.00E+00	mg/kg	#######	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	2.78E-01	0.00E+00	0	4.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.28E+00	5.10E+00	8.39E-01	1.98E+01	2.16E-01	0.53%	1.34%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	5.10E-02	mg/kg	#######			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.20E-04	0	0.00E+00	2.94E-03	0.00E+00	4.94E-03	0.00E+00	1.12E-04	0.00E+00	8.10E-03	4.00E+00	2.03E-03	4.00E+01	2.03E-04	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	2.09E-03	mg/L	4.57E-01	mg/kg	3.02E-01	mg/kg	#######	1.15E+03	6.00E-01	2.87E+01	8.80E-01	1.06E+00	1.06E+00	6.72E-01	6.72E-01	1.72E-04	1.08E-03	7.13E-04	0.0060047	2.06E-03	6.54E-02	0.00E+00	9.65E-03	0.00E+00	5.10E-04	0.00E+00	8.56E-02	1.00E+00	8.56E-02	1.00E+01	8.56E-03	0.05%	0.05%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.08E-07	0	0.00E+00	1.18E-05	0.00E+00	4.86E-08	0.00E+00	3.80E-07	0.00E+00	1.27E-05	4.58E+00	2.77E-06	9.16E+00	1.38E-06	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E+01	mg/kg	#######	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	0.00E+00	0.00E+00	2.60E-02	0	0.00E+00	2.54E-02	0.00E+00	1.36E-02	0.00E+00	2.34E-03	0.00E+00	6.73E-02	3.28E+00	2.05E-02	1.31E+01	5.12E-03	0.01%	0.03%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	5.00E-07	0	0.00E+00	1.45E-05	0.00E+00	5.95E-08	0.00E+00	4.66E-07	0.00E+00	1.55E-05	4.58E+00	3.39E-06	9.16E+00	1.70E-06	0.00%	0.00%
Copper	9.31E-03	mg/L	6.17E+00	mg/kg	6.53E+00	mg/kg	#######	1.11E+03	1.56E+00	1.45E+00	6.44E-01	6.22E-01	6.22E-01	8.97E-02	8.97E-02	7.67E-04	1.45E-02	1.54E-02	0.0259564	7.24E-02	7.14E-02	0.00E+00	1.22E-01	0.00E+00	1.47E-03	0.00E+00	3.24E-01	1.17E+01	2.77E-02	1.51E+01	2.14E-02	0.02%	0.13%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.72E-04	mg/kg	#######		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.05E-07	0	0.00E+00	1.14E-05	0.00E+00	1.24E-07	0.00E+00	3.78E-07	0.00E+00	1.23E-05	2.00E-02	6.15E-04	2.00E-01	6.15E-05	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-04	mg/kg	#######			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	5.61E-07	0	0.00E+00	1.58E-05	0.00E+00	1.96E-07	0.00E+00	7.24E-07	0.00E+00	1.72E-05	9.20E-02	1.87E-04	9.20E-01	1.87E-05	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.93E-04	mg/kg	#######			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.55E-07	0	0.00E+00	1.30E-05	0.00E+00	9.23E-08	0.00E+00	4.24E-07	0.00E+00	1.40E-05	8.00E-02	1.75E-04	2.90E-01	4.82E-05	0.00%	0.00%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	4.18E+00	mg/L	0.00E+00	mg/kg	9.10E+03	mg/kg	#######	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	3.44E-01	0.00E+00	2.15E+01	2.6187527	0.00E+00	2.47E+00	0.00E+00	1.10E+00	0.00E+00	4.01E-02	0.00E+00	2.80E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	#######		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	1.44E-04	0.00E+00	0	2.14E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.29E-03	NA	NA	NA	NA	NA	NA
Lead	4.09E-03	mg/L	0.00E+00	mg/kg	2.21E+01	mg/kg	#######	4.48E+02	7.10E-02	4.50E-01	NA	6.78E-02	6.78E-02	1.16E-02	1.16E-02	3.37E-04	0.00E+00	5.21E-02	0.0045967	0.00E+00	7.48E-02	NA	4.50E-02	0.00E+00	6.45E-04	0.00E+00	1.78E-01	8.00E+00	2.22E-02	8.00E+01	2.22E-03	0.01%	0.01%
Manganese	3.17E-01	mg/L	0.00E+00	mg/kg	8.30E+02	mg/kg	#######	2.50E+02	4.20E-01	2.26E-01	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	2.61E-02	0.00E+00	1.96E+00	0.1986017	0.00E+00	1.41E+00	0.00E+00	1.97E+00	0.00E+00	1.58E-02	0.00E+00	5.58E+00	8.80E+01	6.34E-02	2.84E+02	1.97E-02	0.04%	0.12%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-02	mg/kg	#######		1.14E+00	7.64E+00	NA	1.41E+00	1.41E+00	9.15E-02	9.15E-02	0.00E+00	0.00E+00	1.27E-04	0	0.00E+00	3.11E-03	NA	2.29E-03	0.00E+00	1.24E-05	0.00E+00	5.54E-03	1.00E+00	5.54E-03	3.00E+00	1.85E-03	0.00%	0.01%
Mercury (methyl)	0.00E+00	mg/L	8.35E-02	mg/kg	0.00E+00	mg/kg	#######		1.14E+00	NA	1.15E+00	NA	NA			0.00E+00	1.97E-04	0.00E+00	0	7.14E-04	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	9.10E-04	1.50E-02	6.07E-02	2.50E-02	3.64E-02	0.04%	0.23%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.88E-04	mg/kg	#######			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	6.80E-07	0	0.00E+00	2.03E-05	0.00E+00	2.99E-08	0.00E+00	6.34E-07	0.00E+00	2.17E-05	7.00E-02	3.09E-04	7.00E-01	3.09E-05	0.00%	0.00%
Nickel	0.00E+00	mg/L	8.12E+00	mg/kg	6.36E+00	mg/kg	#######		4.86E-01	1.06E+00	6.43E-02	6.84E-02	6.84E-02	8.71E-02	8.71E-02	0.00E+00	1.92E-02	1.50E-02	0	2.97E-02	5.07E-02	0.00E+00	1.31E-02	0.00E+00	1.39E-03	0.00E+00	1.29E-01	4.00E+01	3.23E-03	8.00E+01	1.61E-03	0.00%	0.01%
Nitrate	4.79E-01	mg/L	9.50E-02	mg/kg	0.00E+00	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	3.94E-02	2.24E-04	0.00E+00	0.3614527	3.00E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.01E-01	5.07E+02	7.92E-04	1.13E+03	3.55E-04	0.00%	0.00%
Nitrate/Nitrite	5.55E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	3.01E+02								4.57E-03	0.00E+00	0.00E+00	0.0418864	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.65E-02	5.07E+02	9.16E-05	1.13E+03	4.11E-05	0.00%	0.00%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E-04	mg/kg	#######			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.02E-07	0	0.00E+00	1.13E-05	0.00E+00	1.35E-07	0.00E+00	3.75E-07	0.00E+00	1.22E-05	4.58E+00	2.67E-06	9.16E+00	1.34E-06	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.62E-04	mg/kg	#######			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.32E-06	0	0.00E+00	3.70E-05	0.00E+00	4.64E-07	0.00E+00	1.24E-06	0.00E+00	4.00E-05	2.40E-01	1.67E-04	2.40E+00	1.67E-05	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-01	mg/kg	#######			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	5.84E-04	0	0.00E+00	1.60E-02	0.00E+00	3.17E-04	0.00E+00	5.44E-04	0.00E+00	1.74E-02	2.40E-01	7.25E-02	2.40E+00	7.25E-03	0.05%	0.05%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	7.70E-02	mg/kg	#######			3.00E-01	NA	3.19E+01	3.19E+01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	1.82E-04	0	0.00E+00	1.74E-04	NA	7.40E-02	0.00E+00	2.14E-05	0.00E+00	7.44E-02	8.50E+00	8.75E-03	2.55E+01	2.92E-03	0.01%	0.02%
Selenium	0.00E+00	mg/L	7.51E-01	mg/kg	3.74E-01	mg/kg	#######	2.05E+02	4.50E+00	1.21E+00	4.92E-01	4.59E-01	4.59E-01	1.51E-01	1.51E-01	0.00E+00	1.77E-03	8.81E-04	0	2.54E-02	3.40E-03	0.00E+00	5.16E-03	0.00E+00	1.42E-04	0.00E+00	3.68E-02	2.00E-01	1.84E-01	3.30E-01	1.11E-01	0.12%	0.69%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.30E+01	mg/kg	#######		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	3.06E-02	0	0.00E+00	8.50E-03	0.00E+00	8.21E-02	0.00E+00	3.61E-03	0.00E+00	1.25E-01	2.63E+02	4.75E-04	7.89E+02	1.58E-04	0.00%	0.00%
Sulfate	5.14E+00	mg/L	1.39E+01	mg/kg	1.30E+02	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	4.23E-01	3.27E-02	3.07E-01	3.8754383	4.39E-02	2.94E-01	0.00E+00	8.22E-01	0.00E+00	3.61E-02	0.00E+00	5.83E+00	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	6.14E-01	mg/kg	0.00E+00	mg/kg	#######	7.50E+01	4.50E+00							0.00E+00	1.45E-03	0.00E+00	0	2.08E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.22E-02	7.40E-03	3.00E+00	7.40E-02	3.00E-01	1.90%	1.87%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	5.96E-07	0	0.00E+00	1.73E-05	0.00E+00	7.09E-08	0.00E+00	5.55E-07	0.00E+00	1.85E-05	4.58E+00	4.04E-06	9.16E+00	2.02E-06	0.00%	0.00%
Vanadium	2.64E-02	mg/L	0.00E+00	mg/kg	1.45E+01	mg/kg	#######	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	2.17E-03	0.00E+00	3.41E-02	0.0199161	0.00E+00	4.57E-03	0.00E+00	1.57E-03	0.00E+00	1.99E-04	0.00E+00	6.26E-02	2.10E-01	2.98E-01	2.10E+00	2.98E-02	0.19%	0.19%
Zinc	0.00E+00	mg/L	3.22E+01	mg/kg	4.79E+01	mg/kg	#######	2.91E+03	1.94E+00	6.34E+00	1.05E+00	8.84E-01	8.84E-01	1.84E-01	1.84E-01	0.00E+00	7.59E-02	1.13E-01	0	4.69E-01	2.29E+00	0.00E+00	1.28E+00	0.00E+00	2.22E-02	0.00E+00	4.24E+00	1.60E+02	2.65E-02	3.20E+02	1.33E-02	0.02%	0.08%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.8E-05	9.0E-06	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	4.7E-04	9.4E-05	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.3E-02	1.3E-03	0.01%	0.01%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	8.7E-04	9.3E-05	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\,x\,Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0.6	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.05	unitless
Aq. Invert diet fraction =	0.15	unitless
Terr. Invert diet fraction =	0.15	unitless
Mammal diet fraction =	0.05	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.01363	kg/d
Sediment ingestion rate =	0.01363	kg/d
Food ingestion rate =	0.29	kg/d
Body weight =	5.78	kg
Home range =	637.5293	acres
Water intake rate =	0.476	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-83
Tier 1 COPCs
EEQs and Hazard Indices for the Raccoon-Louisiana Black Bear at LHAAP
Low Impact Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							----------	----------	----------	----------	Unitless	----------	----------	----------	----------	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	1.22E-08	mg/L	8.87E-06	mg/kg	3.95E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	1.00E-09	3.67E-09	1.63E-09	3.068E-06	8.61E-07	3.89E-07	0.00E+00	3.19E-10	0.00E+00	3.56E-10	0.00E+00	4.33E-06	1.00E-06	4.33E+00	1.00E-05	4.33E-01	3.91%	3.83%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.40E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	5.80E-07	0	0.00E+00	9.65E-05	0.00E+00	1.99E-06	0.00E+00	2.39E-06	0.00E+00	1.01E-04	8.00E-01	1.27E-04	4.00E+00	2.54E-05	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	4.30E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	1.78E-06	0	0.00E+00	2.98E-04	0.00E+00	4.73E-05	0.00E+00	6.32E-06	0.00E+00	3.53E-04	8.00E-01	4.41E-04	4.00E+00	8.83E-05	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.23E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	0.00E+00	9.23E-07	0	0.00E+00	1.59E-04	0.00E+00	3.17E-06	0.00E+00	5.48E-06	0.00E+00	1.69E-04	8.00E-01	2.11E-04	4.00E+00	4.22E-05	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.87E-04	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	7.75E-08	0	0.00E+00	1.33E-05	0.00E+00	2.25E-08	0.00E+00	3.19E-07	0.00E+00	1.38E-05	2.00E-01	6.88E-05	1.00E+00	1.38E-05	0.00%	0.00%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.76E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.56E-07	0	0.00E+00	2.63E-05	0.00E+00	2.69E-07	0.00E+00	6.41E-07	0.00E+00	2.74E-05	4.58E+00	5.98E-06	9.16E+00	2.99E-06	0.00%	0.00%
Aluminum	6.11E+00	mg/L	9.69E+03	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	5.03E-01	4.02E+00	0.00E+00	0.0388711	1.94E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.98E+02	1.93E+00	1.03E+02	1.93E+01	1.03E+01	92.91%	90.87%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	6.37E-01	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	2.64E-04	0	0.00E+00	3.22E-03	0.00E+00	7.91E-04	0.00E+00	1.57E-04	0.00E+00	4.43E-03	1.25E-01	3.55E-02	1.25E+00	3.55E-03	0.03%	0.03%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.07E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.27E-06	0	0.00E+00	2.15E-04	0.00E+00	8.88E-06	0.00E+00	5.23E-06	0.00E+00	2.31E-04	6.85E-02	3.37E-03	6.85E-01	3.37E-04	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.42E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	5.88E-07	0	0.00E+00	9.96E-05	0.00E+00	2.55E-07	0.00E+00	2.42E-06	0.00E+00	1.03E-04	6.80E-02	1.51E-03	6.90E-01	1.49E-04	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.11E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	0.00E+00	1.70E-06	0	0.00E+00	2.96E-04	0.00E+00	6.45E-07	0.00E+00	6.46E-06	0.00E+00	3.04E-04	6.80E-02	4.48E-03	6.90E-01	4.41E-04	0.00%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	7.47E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	3.09E-06	0	0.00E+00	5.65E-04	0.00E+00	6.03E-07	0.00E+00	2.12E-05	0.00E+00	5.90E-04	6.80E-02	8.68E-03	6.90E-01	8.55E-04	0.01%	0.01%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.50E-04	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.52E-07	0	0.00E+00	5.28E-05	0.00E+00	7.94E-06	0.00E+00	1.45E-06	0.00E+00	6.26E-05	6.80E-02	9.20E-04	6.90E-01	9.07E-05	0.00%	0.00%
Barium	0.00E+00	mg/L	1.32E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	5.48E-02	0.00E+00	0	2.64E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.70E+00	5.10E+00	5.29E-01	1.98E+01	1.36E-01	0.48%	1.21%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	6.80E-02	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.82E-05	0	0.00E+00	4.00E-03	0.00E+00	3.88E-03	0.00E+00	1.16E-04	0.00E+00	8.03E-03	4.00E+00	2.01E-03	4.00E+01	2.01E-04	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	2.49E-03	mg/L	5.48E-01	mg/kg	3.84E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.58E+01	8.11E-01	9.52E-01	9.52E-01	9.22E-01	9.22E-01	2.05E-04	2.27E-04	1.59E-04	0.005997	1.94E-02	4.40E-02	0.00E+00	6.49E-03	0.00E+00	5.24E-04	0.00E+00	7.70E-02	1.00E+00	7.70E-02	1.00E+01	7.70E-03	0.07%	0.07%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.88E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	7.77E-08	0	0.00E+00	1.31E-05	0.00E+00	1.34E-07	0.00E+00	3.20E-07	0.00E+00	1.36E-05	4.58E+00	2.98E-06	9.16E+00	1.49E-06	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.22E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	0.00E+00	0.00E+00	5.07E-03	0	0.00E+00	1.72E-01	0.00E+00	1.04E-01	0.00E+00	6.04E-03	0.00E+00	2.87E-01	3.28E+00	8.76E-02	1.31E+01	2.19E-02	0.08%	0.19%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.03E-07	0	0.00E+00	1.73E-05	0.00E+00	1.77E-07	0.00E+00	4.22E-07	0.00E+00	1.80E-05	4.58E+00	3.93E-06	9.16E+00	1.97E-06	0.00%	0.00%
Copper	1.18E-02	mg/L	7.20E+00	mg/kg	7.43E+00	mg/kg	1.00E+00	5.92E+03	5.25E+00	1.32E+00	5.86E-01	5.75E-01	5.75E-01	1.49E-01	1.49E-01	9.72E-04	2.98E-03	3.08E-03	0.1033129	1.68E-01	4.34E-02	0.00E+00	7.58E-02	0.00E+00	1.64E-03	0.00E+00	3.99E-01	1.17E+01	3.41E-02	1.51E+01	2.64E-02	0.03%	0.23%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.86E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	7.69E-08	0	0.00E+00	1.26E-05	0.00E+00	5.40E-06	0.00E+00	3.16E-07	0.00E+00	1.84E-05	2.00E-02	9.19E-04	2.00E-01	9.19E-05	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.75E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	1.14E-07	0	0.00E+00	1.87E-05	0.00E+00	1.87E-07	0.00E+00	4.96E-07	0.00E+00	1.95E-05	9.20E-02	2.11E-04	9.20E-01	2.11E-05	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.20E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	9.13E-08	0	0.00E+00	1.52E-05	0.00E+00	7.39E-08	0.00E+00	3.76E-07	0.00E+00	1.57E-05	8.00E-02	1.96E-04	2.90E-01	5.42E-05	0.00%	0.00%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	5.98E+00	mg/L	0.00E+00	mg/kg	1.00E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	4.92E-01	0.00E+00	4.16E+00	8.8409168	0.00E+00	3.47E+00	0.00E+00	7.12E-01	0.00E+00	3.07E-02	0.00E+00	1.77E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	2.53E-05	0.00E+00	0	5.92E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.95E-03	NA	NA	NA	NA	NA	NA
Lead	5.18E-03	mg/L	0.00E+00	mg/kg	2.51E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	4.39E-01	NA	6.40E-02	6.40E-02	1.33E-02	1.33E-02	4.27E-04	0.00E+00	1.04E-02	0.0114937	0.00E+00	4.90E-02	NA	2.86E-02	0.00E+00	4.95E-04	0.00E+00	1.00E-01	8.00E+00	1.25E-02	8.00E+01	1.25E-03	0.01%	0.01%
Manganese	4.54E-01	mg/L	0.00E+00	mg/kg	9.35E+02	mg/kg	1.00E+00	2.00E+03	2.10E+00	2.21E-01	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	3.74E-02	0.00E+00	3.87E-01	1.3442992	0.00E+00	9.17E-01	0.00E+00	1.66E+00	0.00E+00	1.32E-02	0.00E+00	4.36E+00	8.80E+01	4.95E-02	2.84E+02	1.54E-02	0.04%	0.14%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.95E-02	mg/kg	1.00E+00		2.87E+00	7.16E+00	NA	1.35E+00	1.35E+00	1.03E-01	1.03E-01	0.00E+00	0.00E+00	2.47E-05	0	0.00E+00	1.89E-03	NA	1.42E-03	0.00E+00	9.07E-06	0.00E+00	3.35E-03	1.00E+00	3.35E-03	3.00E+00	1.12E-03	0.00%	0.01%
Mercury (methyl)	0.00E+00	mg/L	9.58E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.08E+00	NA	NA			0.00E+00	3.97E-05	0.00E+00	0	1.22E-03	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	1.26E-03	1.50E-02	8.39E-02	2.50E-02	5.03E-02	0.08%	0.45%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.41E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.41E-07	0	0.00E+00	2.46E-05	0.00E+00	2.08E-07	0.00E+00	5.82E-07	0.00E+00	2.55E-05	7.00E-02	3.65E-04	7.00E-01	3.65E-05	0.00%	0.00%
Nickel	0.00E+00	mg/L	9.33E+00	mg/kg	7.10E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	6.21E-02	6.65E-02	6.65E-02	1.01E-01	1.01E-01	0.00E+00	3.86E-03	2.94E-03	0	9.60E-02	1.49E-01	0.00E+00	8.39E-03	0.00E+00	1.06E-03	0.00E+00	2.61E-01	4.00E+01	6.54E-03	8.00E+01	3.27E-03	0.01%	0.03%
Nitrate	8.67E-01	mg/L	1.30E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	7.14E-02	5.37E-05	0.00E+00	1.3699313	1.21E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.44E+00	5.07E+02	2.85E-03	1.13E+03	1.28E-03	0.00%	0.01%
Nitrate/Nitrite	7.06E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03								5.82E-03	0.00E+00	0.00E+00	0.1115402	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E-01	5.07E+02	2.31E-04	1.13E+03	1.04E-04	0.00%	0.00%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	7.28E-08	0	0.00E+00	1.19E-05	0.00E+00	8.22E-08	0.00E+00	3.00E-07	0.00E+00	1.24E-05	4.58E+00	2.70E-06	9.16E+00	1.35E-06	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	8.83E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.66E-07	0	0.00E+00	5.95E-05	0.00E+00	5.25E-07	0.00E+00	1.51E-06	0.00E+00	6.19E-05	2.40E-01	2.58E-04	2.40E+00	2.58E-05	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	4.23E-01	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.75E-04	0	0.00E+00	2.79E-02	0.00E+00	5.29E-04	0.00E+00	7.20E-04	0.00E+00	2.93E-02	2.40E-01	1.22E-01	2.40E+00	1.22E-02	0.11%	0.11%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.80E-01	mg/kg	1.00E+00			1.14E+00	NA	1.88E+01	1.88E+01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	1.16E-04	0	0.00E+00	1.42E-03	NA	9.34E-02	0.00E+00	6.88E-05	0.00E+00	9.50E-02	8.50E+00	1.12E-02	2.55E+01	3.72E-03	0.01%	0.03%
Selenium	0.00E+00	mg/L	8.67E-01	mg/kg	4.13E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.18E+00	4.99E-01	4.64E-01	4.64E-01	1.95E-01	1.95E-01	0.00E+00	3.59E-04	1.71E-04	0	1.73E-02	2.16E-03	0.00E+00	3.40E-03	0.00E+00	1.19E-04	0.00E+00	2.35E-02	2.00E-01	1.18E-01	3.30E-01	7.12E-02	0.11%	0.63%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	5.91E-03	0	0.00E+00	1.76E-02	0.00E+00	8.87E-02	0.00E+00	3.51E-03	0.00E+00	1.16E-01	2.63E+02	4.40E-04	7.89E+02	1.47E-04	0.00%	0.00%
Sulfate	6.09E+00	mg/L	2.00E+01	mg/kg	2.30E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	5.02E-01	8.27E-03	9.53E-02	9.6225004	1.86E-01	1.16E+00	0.00E+00	1.43E+00	0.00E+00	5.65E-02	0.00E+00	1.31E+01	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	7.12E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00							0.00E+00	2.95E-04	0.00E+00	0	1.42E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.45E-02	7.40E-03	1.96E+00	7.40E-02	1.96E-01	1.77%	1.74%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.04E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.26E-07	0	0.00E+00	2.12E-05	0.00E+00	2.17E-07	0.00E+00	5.17E-07	0.00E+00	2.21E-05	4.58E+00	4.82E-06	9.16E+00	2.41E-06	0.00%	0.00%
Vanadium	3.33E-02	mg/L	0.00E+00	mg/kg	1.53E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	2.74E-03	0.00E+00	6.35E-03	0.0526088	0.00E+00	5.99E-03	0.00E+00	1.09E-03	0.00E+00	1.34E-04	0.00E+00	6.89E-02	2.10E-01	3.28E-01	2.10E+00	3.28E-02	0.30%	0.29%
Zinc	0.00E+00	mg/L	3.82E+01	mg/kg	5.89E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.53E+00	9.78E-01	8.08E-01	8.08E-01	4.51E-01	4.51E-01	0.00E+00	1.58E-02	2.44E-02	0	1.28E+00	1.44E+00	0.00E+00	8.44E-01	0.00E+00	3.93E-02	0.00E+00	3.64E+00	1.60E+02	2.28E-02	3.20E+02	1.14E-02	0.02%	0.10%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	2.0E-05	1.0E-05	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	7.8E-04	1.6E-04	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.9E-02	1.9E-03	0.02%	0.02%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	1.2E-03	1.3E-04	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi \, x \, Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text tables.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0.6	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.05	unitless
Aq. Invert diet fraction =	0.15	unitless
Terr. Invert diet fraction =	0.15	unitless
Mammal diet fraction =	0.05	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.002394	kg/d
Sediment ingestion rate =	0.002394	kg/d
Food ingestion rate =	0.171	kg/d
Body weight =	5.78	kg
Home range =	2011	acres
Water intake rate =	0.476	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-84
Tier 2 COPCs
EEQs and Hazard Indices for the Raccoon-Louisiana Black Bear at LHAAP
Low Impact Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
							-----	-----	-----	-----	-----Unitless	-----	-----	-----	
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01
2,3,7,8-TCDD TEQ	1.07E-08	mg/L	5.59E-06	mg/kg	3.18E-06	mg/kg	#######	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	8.00E-04	mg/kg	#######		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	3.10E-03	mg/kg	#######		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.07E-03	mg/kg	#######		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	#######			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.15E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Aluminum	4.16E+00	mg/L	8.09E+03	mg/kg	0.00E+00	mg/kg	#######	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-01	mg/kg	#######			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.55E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.21E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	3.32E-03	mg/kg	#######		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	4.07E-03	mg/kg	#######			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	7.92E-04	mg/kg	#######			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	0.00E+00	mg/kg	#######	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	5.10E-02	mg/kg	#######			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01
Cadmium	2.09E-03	mg/L	4.57E-01	mg/kg	3.02E-01	mg/kg	#######	1.15E+03	6.00E-01	2.87E+01	8.80E-01	1.06E+00	1.06E+00	6.72E-01	6.72E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E+01	mg/kg	#######	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Copper	9.31E-03	mg/L	6.17E+00	mg/kg	6.53E+00	mg/kg	#######	1.11E+03	1.56E+00	1.45E+00	6.44E-01	6.22E-01	6.22E-01	8.97E-02	8.97E-02
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.72E-04	mg/kg	#######		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-04	mg/kg	#######			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.93E-04	mg/kg	#######			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01
Iron	4.18E+00	mg/L	0.00E+00	mg/kg	9.10E+03	mg/kg	#######	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	#######		4.67E+00		1.39E+01	1.39E+01	1.39E+01		
Lead	4.09E-03	mg/L	0.00E+00	mg/kg	2.21E+01	mg/kg	#######	4.48E+02	7.10E-02	4.50E-01	NA	6.78E-02	6.78E-02	1.16E-02	1.16E-02
Manganese	3.17E-01	mg/L	0.00E+00	mg/kg	8.30E+02	mg/kg	#######	2.50E+02	4.20E-01	2.26E-01	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-02	mg/kg	#######		1.14E+00	7.64E+00	NA	1.41E+00	1.41E+00	9.15E-02	9.15E-02
Mercury (methyl)	0.00E+00	mg/L	8.35E-02	mg/kg	0.00E+00	mg/kg	#######		1.14E+00	NA	1.15E+00	NA	NA		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.88E-04	mg/kg	#######			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01
Nickel	0.00E+00	mg/L	8.12E+00	mg/kg	6.36E+00	mg/kg	#######		4.86E-01	1.06E+00	6.43E-02	6.84E-02	6.84E-02	8.71E-02	8.71E-02
Nitrate	4.79E-01	mg/L	9.50E-02	mg/kg	0.00E+00	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Nitrate/Nitrite	5.55E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	3.01E+02							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E-04	mg/kg	#######			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.62E-04	mg/kg	#######			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-01	mg/kg	#######			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	7.70E-02	mg/kg	#######			3.00E-01	NA	3.19E+01	3.19E+01	1.11E-01	1.11E-01
Selenium	0.00E+00	mg/L	7.51E-01	mg/kg	3.74E-01	mg/kg	#######	2.05E+02	4.50E+00	1.21E+00	4.92E-01	4.59E-01	4.59E-01	1.51E-01	1.51E-01
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.50E+00		1.40E-02	1.40E-02	1.40E-02		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.30E+01	mg/kg	#######		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Sulfate	5.14E+00	mg/L	1.39E+01	mg/kg	1.30E+02	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Thallium	0.00E+00	mg/L	6.14E-01	mg/kg	0.00E+00	mg/kg	#######	7.50E+01	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Vanadium	2.64E-02	mg/L	0.00E+00	mg/kg	1.45E+01	mg/kg	#######	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03
Zinc	0.00E+00	mg/L	3.22E+01	mg/kg	4.79E+01	mg/kg	#######	2.91E+03	1.94E+00	6.34E+00	1.05E+00	8.84E-01	8.84E-01	1.84E-01	1.84E-01

Chemical	EED Surface Water (mg/kg-d)	EED Sediment (mg/kg-d)	EED Soil (mg/kg-d)	EED Fish (mg/kg-d)	EED Aq. Invert. (mg/kg-d)	EED Terr. Invert. (mg/kg-d)	EED Aq. Plants (mg/kg-d)	EED Terr. Plants (mg/kg-d)	EED Plant Roots (mg/kg-d)	EED Mammals (mg/kg-d)	EED Birds (mg/kg-d)	Total EED (mg/kg-d)	NOAEL (mg/kg-d)	EEQ N	LOAEL (mg/kg-d)	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	8.79E-10	2.32E-09	1.32E-09	3.644E-07	1.16E-07	1.56E-07	0.00E+00	2.19E-10	0.00E+00	2.23E-10	0.00E+00	6.41E-07	1.00E-06	6.41E-01	1.00E-05	6.41E-02	0.72%	0.71%
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	0.00E+00	3.32E-07	0	0.00E+00	3.18E-05	0.00E+00	3.98E-07	0.00E+00	1.04E-06	0.00E+00	3.36E-05	8.00E-01	4.19E-05	4.00E+00	8.39E-06	0.00%	0.00%
4,4'-DDE	0.00E+00	0.00E+00	1.28E-06	0	0.00E+00	1.24E-04	0.00E+00	7.48E-06	0.00E+00	4.32E-06	0.00E+00	1.37E-04	8.00E-01	1.71E-04	4.00E+00	3.42E-05	0.00%	0.00%
4,4'-DDT	0.00E+00	0.00E+00	4.42E-07	0	0.00E+00	4.40E-05	0.00E+00	5.31E-07	0.00E+00	1.40E-06	0.00E+00	4.64E-05	8.00E-01	5.79E-05	4.00E+00	1.16E-05	0.00%	0.00%
Aldrin	0.00E+00	0.00E+00	7.29E-08	0	0.00E+00	7.24E-06	0.00E+00	1.52E-08	0.00E+00	2.28E-07	0.00E+00	7.55E-06	2.00E-01	3.78E-05	1.00E+00	7.55E-06	0.00%	0.00%
alpha-Chlordane	0.00E+00	0.00E+00	1.31E-07	0	0.00E+00	1.27E-05	0.00E+00	5.22E-08	0.00E+00	4.09E-07	0.00E+00	1.33E-05	4.58E+00	2.90E-06	9.16E+00	1.45E-06	0.00%	0.00%
Aluminum	3.42E-01	3.35E+00	0.00E+00	0.0264324	1.62E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.65E+02	1.93E+00	8.56E+01	1.93E+01	8.56E+00	96.34%	94.55%
Antimony	0.00E+00	0.00E+00	2.11E-04	0	0.00E+00	6.78E-04	0.00E+00	3.35E-04	0.00E+00	8.34E-05	0.00E+00	1.31E-03	1.25E-01	1.05E-02	1.25E+00	1.05E-03	0.01%	0.01%
Aroclor 1242	0.00E+00	0.00E+00	1.06E-06	0	0.00E+00	1.03E-04	0.00E+00	3.80E-07	0.00E+00	3.31E-06	0.00E+00	1.08E-04	6.85E-02	1.58E-03	6.85E-01	1.58E-04	0.00%	0.00%
Aroclor 1248	0.00E+00	0.00E+00	5.01E-07	0	0.00E+00	4.89E-05	0.00E+00	1.80E-07	0.00E+00	1.57E-06	0.00E+00	5.11E-05	6.80E-02	7.52E-04	6.90E-01	7.41E-05	0.00%	0.00%
Aroclor 1254	0.00E+00	0.00E+00	1.37E-06	0	0.00E+00	1.38E-04	0.00E+00	2.11E-07	0.00E+00	2.44E-06	0.00E+00	1.42E-04	6.80E-02	2.08E-03	6.90E-01	2.05E-04	0.00%	0.00%
Aroclor 1260	0.00E+00	0.00E+00	1.69E-06	0	0.00E+00	1.78E-04	0.00E+00	4.64E-08	0.00E+00	1.01E-05	0.00E+00	1.89E-04	6.80E-02	2.79E-03	6.90E-01	2.75E-04	0.00%	0.00%
Aroclor 1268	0.00E+00	0.00E+00	3.28E-07	0	0.00E+00	2.84E-05	0.00E+00	7.40E-06	0.00E+00	1.03E-06	0.00E+00	3.71E-05	6.80E-02	5.46E-04	6.90E-01	5.38E-05	0.00%	0.00%
Barium	0.00E+00	4.89E-02	0.00E+00	0	2.36E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.41E+00	5.10E+00	4.72E-01	1.98E+01	1.22E-01	0.53%	1.34%
Benzoic Acid	0.00E+00	0.00E+00	2.11E-05	0	0.00E+00	1.73E-03	0.00E+00	2.91E-03	0.00E+00	6.61E-05	0.00E+00	4.73E-03	4.00E+00	1.18E-03	4.00E+01	1.18E-04	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	1.72E-04	1.89E-04	1.25E-04	0.0035407	1.22E-03	3.86E-02	0.00E+00	5.69E-03	0.00E+00	3.01E-04	0.00E+00	4.98E-02	1.00E+00	4.98E-02	1.00E+01	4.98E-03	0.06%	0.05%
Chlordane	0.00E+00	0.00E+00	7.17E-08	0	0.00E+00	6.98E-06	0.00E+00	2.86E-08	0.00E+00	2.24E-07	0.00E+00	7.30E-06	4.58E+00	1.59E-06	9.16E+00	7.97E-07	0.00%	0.00%
Chromium	0.00E+00	0.00E+00	4.57E-03	0	0.00E+00	1.50E-02	0.00E+00	8.02E-03	0.00E+00	1.38E-03	0.00E+00	2.89E-02	3.28E+00	8.82E-03	1.31E+01	2.20E-03	0.01%	0.02%
cis-Nonachlor	0.00E+00	0.00E+00	8.78E-08	0	0.00E+00	8.55E-06	0.00E+00	3.51E-08	0.00E+00	2.75E-07	0.00E+00	8.95E-06	4.58E+00	1.95E-06	9.16E+00	9.77E-07	0.00%	0.00%
Copper	7.67E-04	2.55E-03	2.70E-03	0.0153053	4.27E-02	4.21E-02	0.00E+00	7.21E-02	0.00E+00	8.66E-04	0.00E+00	1.79E-01	1.17E+01	1.53E-02	1.51E+01	1.18E-02	0.02%	0.13%
Dieldrin	0.00E+00	0.00E+00	7.12E-08	0	0.00E+00	6.72E-06	0.00E+00	7.32E-08	0.00E+00	2.23E-07	0.00E+00	7.08E-06	2.00E-02	3.54E-04	2.00E-01	3.54E-05	0.00%	0.00%
Endrin	0.00E+00	0.00E+00	9.85E-08	0	0.00E+00	9.29E-06	0.00E+00	1.16E-07	0.00E+00	4.27E-07	0.00E+00	9.93E-06	9.20E-02	1.08E-04	9.20E-01	1.08E-05	0.00%	0.00%
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	0.00E+00	8.00E-08	0	0.00E+00	7.67E-06	0.00E+00	5.44E-08	0.00E+00	2.50E-07	0.00E+00	8.05E-06	8.00E-02	1.01E-04	2.90E-01	2.78E-05	0.00%	0.00%
HMX	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	3.44E-01	0.00E+00	3.77E+00	1.5441611	0.00E+00	1.45E+00	0.00E+00	6.46E-01	0.00E+00	2.37E-02	0.00E+00	7.78E+00	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	2.53E-05	0.00E+00	0	1.26E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.29E-03	NA	NA	NA	NA	NA	NA
Lead	3.37E-04	0.00E+00	9.14E-03	0.0027104	0.00E+00	4.41E-02	NA	2.66E-02	0.00E+00	3.80E-04	0.00E+00	8.32E-02	8.00E+00	1.04E-02	8.00E+01	1.04E-03	0.01%	0.01%
Manganese	2.61E-02	0.00E+00	3.44E-01	0.1171065	0.00E+00	8.32E-01	0.00E+00	1.16E+00	0.00E+00	9.31E-03	0.00E+00	2.49E+00	8.80E+01	2.83E-02	2.84E+02	8.77E-03	0.03%	0.10%
Mercury (inorganic)	0.00E+00	0.00E+00	2.24E-05	0	0.00E+00	1.83E-03	NA	1.35E-03	0.00E+00	7.31E-06	0.00E+00	3.21E-03	1.00E+00	3.21E-03	3.00E+00	1.07E-03	0.00%	0.01%
Mercury (methyl)	0.00E+00	3.46E-05	0.00E+00	0	4.21E-04	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	4.55E-04	1.50E-02	3.04E-02	2.50E-02	1.82E-02	0.03%	0.20%
Mirex	0.00E+00	0.00E+00	1.19E-07	0	0.00E+00	1.20E-05	0.00E+00	1.76E-08	0.00E+00	3.74E-07	0.00E+00	1.25E-05	7.00E-02	1.78E-04	7.00E-01	1.78E-05	0.00%	0.00%
Nickel	0.00E+00	3.36E-03	2.63E-03	0	1.75E-02	2.99E-02	0.00E+00	7.72E-03	0.00E+00	8.19E-04	0.00E+00	6.19E-02	4.00E+01	1.55E-03	8.00E+01	7.74E-04	0.00%	0.01%
Nitrate	3.94E-02	3.93E-05	0.00E+00	0.2131325	1.77E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.53E-01	5.07E+02	4.99E-04	1.13E+03	2.24E-04	0.00%	0.00%
Nitrate/Nitrite	4.57E-03	0.00E+00	0.00E+00	0.0246986	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.93E-02	5.07E+02	5.77E-05	1.13E+03	2.59E-05	0.00%	0.00%
Oxychlordane	0.00E+00	0.00E+00	7.07E-08	0	0.00E+00	6.67E-06	0.00E+00	7.98E-08	0.00E+00	2.21E-07	0.00E+00	7.04E-06	4.58E+00	1.54E-06	9.16E+00	7.69E-07	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	0.00E+00	2.33E-07	0	0.00E+00	2.18E-05	0.00E+00	2.73E-07	0.00E+00	7.28E-07	0.00E+00	2.31E-05	2.40E-01	9.61E-05	2.40E+00	9.61E-06	0.00%	0.00%
Pentachlorophenol	0.00E+00	0.00E+00	1.03E-04	0	0.00E+00	9.41E-03	0.00E+00	1.87E-04	0.00E+00	3.21E-04	0.00E+00	1.00E-02	2.40E-01	4.17E-02	2.40E+00	4.17E-03	0.05%	0.05%
Perchlorate	0.00E+00	0.00E+00	3.19E-05	0	0.00E+00	1.03E-04	NA	4.36E-02	0.00E+00	1.26E-05	0.00E+00	4.38E-02	8.50E+00	5.15E-03	2.55E+01	1.72E-03	0.01%	0.02%
Selenium	0.00E+00	3.11E-04	1.55E-04	0	1.50E-02	2.01E-03	0.00E+00	3.04E-03	0.00E+00	8.34E-05	0.00E+00	2.06E-02	2.00E-01	1.03E-01	3.30E-01	6.24E-02	0.12%	0.69%
Silver	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	0.00E+00	5.38E-03	0	0.00E+00	5.01E-03	0.00E+00	4.84E-02	0.00E+00	2.13E-03	0.00E+00	6.09E-02	2.63E+02	2.32E-04	7.89E+02	7.72E-05	0.00%	0.00%
Sulfate	4.23E-01	5.75E-03	5.38E-02	2.2851722	2.59E-02	1.73E-01	0.00E+00	4.85E-01	0.00E+00	2.13E-02	0.00E+00	3.47E+00	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	2.54E-04	0.00E+00	0	1.23E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-02	7.40E-03	1.69E+00	7.40E-02	1.69E-01	1.90%	1.87%
trans-Nonachlor	0.00E+00	0.00E+00	1.05E-07	0	0.00E+00	1.02E-05	0.00E+00	4.18E-08	0.00E+00	3.28E-07	0.00E+00	1.07E-05	4.58E+00	2.33E-06	9.16E+00	1.16E-06	0.00%	0.00%
Vanadium	2.17E-03	0.00E+00	5.99E-03	0.0117436	0.00E+00	2.70E-03	0.00E+00	9.25E-04	0.00E+00	1.17E-04	0.00E+00	2.36E-02	2.10E-01	1.13E-01	2.10E+00	1.13E-02	0.13%	0.12%
Zinc	0.00E+00	1.33E-02	1.99E-02	0	2.77E-01	1.35E+00	0.00E+00	7.53E-01	0.00E+00	1.31E-02	0.00E+00	2.42E+00	1.60E+02	1.52E-02	3.20E+02	7.58E-03	0.02%	0.08%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.0E-05	5.2E-06	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	2.7E-04	5.4E-05	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	7.7E-03	7.7E-04	0.01%	0.01%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	5.0E-04	5.4E-05	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0.6	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.05	unitless
Aq. Invert diet fraction =	0.15	unitless
Terr. Invert diet fraction =	0.15	unitless
Mammal diet fraction =	0.05	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.002394	kg/d
Sediment ingestion rate =	0.002394	kg/d
Food ingestion rate =	0.171	kg/d
Body weight =	5.78	kg
Home range =	2011	acres
Water intake rate =	0.476	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-85
Tier 1 COPCs
EEQs and Hazard Indices for the Short-tailed Shrew at LHAAP
Low Impact Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Total Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL		LOAEL		Percent Contribution to	Percent Contribution to
							----	----	----	----	Unitless	----	----	----		mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	EEQ N	mg/kg-d	EEQ L	EEQ N	EEQ L
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	1.22E-08	mg/L	8.87E-06	mg/kg	3.95E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	2.68E-09	0.00E+00	5.52E-08	0	0.00E+00	9.43E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.49E-06	1.00E-06	9.49E+00	1.00E-05	9.49E-01	46.93%	36.01%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.42E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.98E-05	0	0.00E+00	2.36E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.38E-03	8.00E-01	2.98E-03	4.00E+00	5.96E-04	0.01%	0.02%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	4.15E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	5.79E-05	0	0.00E+00	6.95E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.01E-03	8.00E-01	8.76E-03	4.00E+00	1.75E-03	0.04%	0.07%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.82E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	0.00E+00	2.55E-05	0	0.00E+00	3.15E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.18E-03	8.00E-01	3.97E-03	4.00E+00	7.94E-04	0.02%	0.03%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.04E-04	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.84E-06	0	0.00E+00	3.51E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-04	2.00E-01	1.77E-03	1.00E+00	3.54E-04	0.01%	0.01%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.68E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	5.14E-06	0	0.00E+00	6.23E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.28E-04	4.58E+00	1.37E-04	9.16E+00	6.86E-05	0.00%	0.00%
Aluminum	6.11E+00	mg/L	9.69E+03	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	1.34E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.34E+00	1.93E+00	6.97E-01	1.93E+01	6.97E-02	3.44%	2.64%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.68E-01	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	7.93E-03	0	0.00E+00	6.95E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.75E-02	1.25E-01	6.20E-01	1.25E+00	6.20E-02	3.06%	2.35%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.04E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.24E-05	0	0.00E+00	5.16E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.20E-03	6.85E-02	7.59E-02	6.85E-01	7.59E-03	0.38%	0.29%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.37E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.92E-05	0	0.00E+00	2.33E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.35E-03	6.80E-02	3.45E-02	6.80E-01	3.45E-03	0.17%	0.13%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.04E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	0.00E+00	5.64E-05	0	0.00E+00	7.04E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.09E-03	6.80E-02	1.04E-01	6.80E-01	1.04E-02	0.52%	0.40%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	6.22E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	8.69E-05	0	0.00E+00	1.14E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E-02	6.80E-02	1.69E-01	6.80E-01	1.69E-02	0.84%	0.64%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.97E-04	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.25E-05	0	0.00E+00	1.35E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E-03	6.80E-02	2.00E-02	6.80E-01	2.00E-03	0.10%	0.08%
Barium	0.00E+00	mg/L	1.32E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E+00	0.00E+00	1.98E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	2.50E-02	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.49E-04	0	0.00E+00	3.57E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.60E-02	4.00E+00	9.00E-03	4.00E+01	9.00E-04	0.04%	0.03%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	2.49E-03	mg/L	5.48E-01	mg/kg	3.95E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.55E+01	8.11E-01	9.40E-01	9.40E-01	9.22E-01	9.22E-01	5.47E-04	0.00E+00	5.52E-03	0	0.00E+00	1.08E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E+00	1.00E+00	1.09E+00	1.00E+01	1.09E-01	5.38%	4.13%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.93E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.70E-06	0	0.00E+00	3.27E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.30E-04	4.58E+00	7.20E-05	9.16E+00	3.60E-05	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.16E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	0.00E+00	0.00E+00	1.62E-01	0	0.00E+00	3.95E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.11E+00	3.28E+00	1.25E+00	1.31E+01	3.13E-01	6.19%	11.86%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.52E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.52E-06	0	0.00E+00	4.27E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.30E-04	4.58E+00	9.40E-05	9.16E+00	4.70E-05	0.00%	0.00%
Copper	1.18E-02	mg/L	7.20E+00	mg/kg	7.35E+00	mg/kg	1.00E+00	5.92E+03	5.25E+00	1.33E+00	5.86E-01	5.79E-01	5.79E-01	1.49E-01	1.49E-01	2.60E-03	0.00E+00	1.03E-01	0	0.00E+00	1.05E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E+00	1.17E+01	9.86E-02	1.51E+01	7.62E-02	0.49%	2.89%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.88E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.63E-06	0	0.00E+00	3.09E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.12E-04	2.00E-02	1.56E-02	2.00E-01	1.56E-03	0.08%	0.06%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.77E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	3.87E-06	0	0.00E+00	4.54E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E-04	9.20E-02	4.98E-03	9.20E-01	4.98E-04	0.02%	0.02%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.36E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.30E-06	0	0.00E+00	3.93E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.97E-04	8.00E-02	4.96E-03	2.90E-01	1.37E-03	0.02%	0.05%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	5.98E+00	mg/L	0.00E+00	mg/kg	1.01E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	1.31E+00	0.00E+00	1.40E+02	0	0.00E+00	8.43E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.26E+02	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	5.18E-03	mg/L	0.00E+00	mg/kg	2.30E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	4.47E-01	NA	6.65E-02	6.65E-02	1.33E-02	1.33E-02	1.14E-03	0.00E+00	3.22E-01	0	0.00E+00	1.11E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.43E+00	8.00E+00	1.78E-01	8.00E+01	1.78E-02	0.88%	0.68%
Manganese	4.54E-01	mg/L	0.00E+00	mg/kg	9.62E+02	mg/kg	1.00E+00	2.00E+03	2.10E+00	2.20E-01	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	1.00E-01	0.00E+00	1.34E+01	0	0.00E+00	2.27E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.63E+01	8.80E+01	4.12E-01	2.84E+02	1.28E-01	2.04%	4.84%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.69E-02	mg/kg	1.00E+00		2.87E+00	7.38E+00	NA	1.38E+00	1.38E+00	1.03E-01	1.03E-01	0.00E+00	0.00E+00	7.94E-04	0	0.00E+00	4.51E-02	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.59E-02	1.32E+01	3.48E-03	3.96E+01	1.16E-03	0.02%	0.04%
Mercury (methyl)	0.00E+00	mg/L	9.58E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.08E+00	NA	NA			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	3.20E-02	0.00E+00	1.60E-01	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.43E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.79E-06	0	0.00E+00	5.98E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.03E-04	7.00E-02	8.61E-03	7.00E-01	8.61E-04	0.04%	0.03%
Nickel	0.00E+00	mg/L	9.33E+00	mg/kg	6.83E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	6.21E-02	6.72E-02	6.72E-02	1.01E-01	1.01E-01	0.00E+00	0.00E+00	9.54E-02	0	0.00E+00	3.47E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.57E+00	4.00E+01	8.92E-02	8.00E+01	4.46E-02	0.44%	1.69%
Nitrate	8.67E-01	mg/L	1.30E-01	mg/kg	1.86E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	1.91E-01	0.00E+00	2.60E-02	0	0.00E+00	2.28E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.45E-01	5.07E+02	8.78E-04	1.13E+03	3.94E-04	0.00%	0.01%
Nitrate/Nitrite	7.06E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03								1.55E-02	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.55E-02	5.07E+02	3.06E-05	1.13E+03	1.37E-05	0.00%	0.00%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.84E-04	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.56E-06	0	0.00E+00	3.01E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.04E-04	4.58E+00	6.64E-05	9.16E+00	3.32E-05	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	9.03E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.26E-05	0	0.00E+00	1.47E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.48E-03	2.40E-01	6.19E-03	2.40E+00	6.19E-04	0.03%	0.02%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	5.32E-01	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	7.43E-03	0	0.00E+00	8.49E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.56E-01	2.40E-01	3.57E+00	2.40E+00	3.57E-01	17.64%	13.53%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	9.01E-02	mg/kg	1.00E+00			1.14E+00	NA	2.99E+01	2.99E+01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	1.26E-03	0	0.00E+00	1.10E-02	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.23E-02	8.50E+00	1.45E-03	2.55E+01	4.82E-04	0.01%	0.02%
Selenium	0.00E+00	mg/L	8.67E-01	mg/kg	3.97E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.19E+00	4.99E-01	4.62E-01	4.62E-01	1.95E-01	1.95E-01	0.00E+00	0.00E+00	5.55E-03	0	0.00E+00	5.08E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.63E-02	2.00E-01	2.82E-01	3.30E-01	1.71E-01	1.39%	6.48%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	1.99E-01	0	0.00E+00	4.26E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.25E-01	2.63E+02	2.38E-03	7.89E+02	7.92E-04	0.01%	0.03%
Sulfate	6.09E+00	mg/L	2.00E+01	mg/kg	2.06E+03	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	1.34E+00	0.00E+00	2.88E+01	0	0.00E+00	2.52E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.82E+02	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	7.12E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00							0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.40E-03	0.00E+00	7.40E-02	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.16E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.41E-06	0	0.00E+00	5.35E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.39E-04	4.58E+00	1.18E-04	9.16E+00	5.89E-05	0.00%	0.00%
Vanadium	3.33E-02	mg/L	0.00E+00	mg/kg	1.54E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	7.33E-03	0.00E+00	2.15E-01	0	0.00E+00	1.45E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.67E-01	2.10E-01	1.75E+00	2.10E+00	1.75E-01	8.64%	6.63%
Zinc	0.00E+00	mg/L	3.82E+01	mg/kg	5.97E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.48E+00	9.78E-01	8.03E-01	8.03E-01	4.51E-01	4.51E-01	0.00E+00	0.00E+00	8.33E-01	0	0.00E+00	3.51E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.59E+01	1.60E+02	2.25E-01	3.20E+02	1.12E-01	1.11%	4.26%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	4.9E-04	2.4E-04	0.00%	0.01%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	1.6E-02	3.1E-03	0.08%	0.12%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	4.0E-01	4.0E-02	2.00%	1.53%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	2.2E-02	2.4E-03	0.11%	0.09%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\,x\,Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text tables.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	1	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.000209	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.001611	kg/d
Body weight =	0.015	kg
Home range =	0.074131	acres
Water intake rate =	0.0033	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-86
Tier 2 COPCs
EEQs and Hazard Indices for the Short-tailed Shrew at LHAAP
Low Impact Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Total Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
									------------	------------	Unitless	------------	------------			mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	1.07E-08	mg/L	5.59E-06	mg/kg	3.18E-06	mg/kg	#######	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	2.35E-09	0.00E+00	4.44E-08	0	0.00E+00	3.76E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.81E-06	1.00E-06	3.81E+00	1.00E-05	3.81E-01	39.29%	27.99%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	8.25E-04	mg/kg	#######		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.15E-05	0	0.00E+00	7.93E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.05E-04	8.00E-01	1.01E-03	4.00E+00	2.01E-04	0.01%	0.01%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	3.08E-03	mg/kg	#######		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	4.31E-05	0	0.00E+00	2.98E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.02E-03	8.00E-01	3.78E-03	4.00E+00	7.56E-04	0.04%	0.06%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E-03	mg/kg	#######		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	1.54E-05	0	0.00E+00	1.10E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E-03	8.00E-01	1.39E-03	4.00E+00	2.78E-04	0.01%	0.02%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.81E-04	mg/kg	#######			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.53E-06	0	0.00E+00	1.80E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E-04	2.00E-01	9.13E-04	1.00E+00	1.83E-04	0.01%	0.01%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.11E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.35E-06	0	0.00E+00	3.04E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.08E-04	4.58E+00	6.73E-05	9.16E+00	3.36E-05	0.00%	0.00%
Aluminum	4.16E+00	mg/L	8.09E+03	mg/kg	0.00E+00	mg/kg	#######	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	9.14E-01	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.14E-01	1.93E+00	4.74E-01	1.93E+01	4.74E-02	4.88%	3.48%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.12E-01	mg/kg	#######			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	7.15E-03	0	0.00E+00	1.65E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.36E-02	1.25E-01	1.89E-01	1.25E+00	1.89E-02	1.95%	1.39%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.54E-05	0	0.00E+00	2.48E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.51E-03	6.85E-02	3.67E-02	6.85E-01	3.67E-03	0.38%	0.27%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.17E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.63E-05	0	0.00E+00	1.15E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.16E-03	6.80E-02	1.71E-02	6.80E-01	1.71E-03	0.18%	0.13%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	3.27E-03	mg/kg	#######		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	4.57E-05	0	0.00E+00	3.29E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.33E-03	6.80E-02	4.90E-02	6.80E-01	4.90E-03	0.51%	0.36%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	4.04E-03	mg/kg	#######			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	5.64E-05	0	0.00E+00	4.26E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.32E-03	6.80E-02	6.35E-02	6.80E-01	6.35E-03	0.65%	0.47%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.43E-04	mg/kg	#######			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.18E-05	0	0.00E+00	7.31E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.43E-04	6.80E-02	1.09E-02	6.80E-01	1.09E-03	0.11%	0.08%
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	0.00E+00	mg/kg	#######	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E+00	0.00E+00	1.98E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	2.19E-02	mg/kg	#######			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.06E-04	0	0.00E+00	1.80E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E-02	4.00E+00	4.58E-03	4.00E+01	4.58E-04	0.05%	0.03%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	2.09E-03	mg/L	4.57E-01	mg/kg	3.19E-01	mg/kg	#######	1.15E+03	6.00E-01	2.80E+01	8.80E-01	1.03E+00	1.03E+00	6.72E-01	6.72E-01	4.59E-04	0.00E+00	4.46E-03	0	0.00E+00	9.62E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.67E-01	1.00E+00	9.67E-01	1.00E+01	9.67E-02	9.97%	7.10%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.16E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.01E-06	0	0.00E+00	2.10E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.13E-04	4.58E+00	4.66E-05	9.16E+00	2.33E-05	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.09E+01	mg/kg	#######	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	0.00E+00	0.00E+00	1.52E-01	0	0.00E+00	3.57E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.09E-01	3.28E+00	1.55E-01	1.31E+01	3.87E-02	1.60%	2.85%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.19E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.06E-06	0	0.00E+00	2.14E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.17E-04	4.58E+00	4.74E-05	9.16E+00	2.37E-05	0.00%	0.00%
Copper	9.31E-03	mg/L	6.17E+00	mg/kg	6.48E+00	mg/kg	#######	1.11E+03	1.56E+00	1.46E+00	6.44E-01	6.25E-01	6.25E-01	8.97E-02	8.97E-02	2.05E-03	0.00E+00	9.05E-02	0	0.00E+00	1.02E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E+00	1.17E+01	9.49E-02	1.51E+01	7.33E-02	0.98%	5.38%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	#######		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.46E-06	0	0.00E+00	1.67E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.69E-04	2.00E-02	8.45E-03	2.00E-01	8.45E-04	0.09%	0.06%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.64E-04	mg/kg	#######			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	3.69E-06	0	0.00E+00	2.50E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.54E-04	9.20E-02	2.76E-03	9.20E-01	2.76E-04	0.03%	0.02%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.04E-04	mg/kg	#######			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.85E-06	0	0.00E+00	1.96E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.99E-04	8.00E-02	2.49E-03	2.90E-01	6.86E-04	0.03%	0.05%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	4.18E+00	mg/L	0.00E+00	mg/kg	9.10E+03	mg/kg	#######	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	9.19E-01	0.00E+00	1.27E+02	0	0.00E+00	3.52E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.63E+02	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	#######		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	4.09E-03	mg/L	0.00E+00	mg/kg	2.03E+01	mg/kg	#######	4.48E+02	7.10E-02	4.57E-01	NA	7.03E-02	7.03E-02	1.16E-02	1.16E-02	9.00E-04	0.00E+00	2.84E-01	0	0.00E+00	9.98E-01	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E+00	8.00E+00	1.60E-01	8.00E+01	1.60E-02	1.65%	1.18%
Manganese	3.17E-01	mg/L	0.00E+00	mg/kg	8.30E+02	mg/kg	#######	2.50E+02	4.20E-01	2.26E-01	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	6.97E-02	0.00E+00	1.16E+01	0	0.00E+00	2.01E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.18E+01	8.80E+01	3.61E-01	2.84E+02	1.12E-01	3.73%	8.22%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.07E-02	mg/kg	#######		1.14E+00	7.97E+00	NA	1.45E+00	1.45E+00	9.15E-02	9.15E-02	0.00E+00	0.00E+00	7.08E-04	0	0.00E+00	4.34E-02	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.41E-02	1.32E+01	3.34E-03	3.96E+01	1.11E-03	0.03%	0.08%
Mercury (methyl)	0.00E+00	mg/L	8.35E-02	mg/kg	0.00E+00	mg/kg	#######		1.14E+00	NA	1.15E+00	NA	NA			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	3.20E-02	0.00E+00	1.60E-01	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.87E-04	mg/kg	#######			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.01E-06	0	0.00E+00	2.88E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.92E-04	7.00E-02	4.18E-03	7.00E-01	4.18E-04	0.04%	0.03%
Nickel	0.00E+00	mg/L	8.12E+00	mg/kg	6.19E+00	mg/kg	#######		4.86E-01	1.06E+00	6.43E-02	6.89E-02	6.89E-02	8.71E-02	8.71E-02	0.00E+00	0.00E+00	8.64E-02	0	0.00E+00	7.04E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.90E-01	4.00E+01	1.98E-02	8.00E+01	9.88E-03	0.20%	0.73%
Nitrate	4.79E-01	mg/L	9.50E-02	mg/kg	1.13E+00	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	1.05E-01	0.00E+00	1.57E-02	0	0.00E+00	3.63E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.57E-01	5.07E+02	3.11E-04	1.13E+03	1.39E-04	0.00%	0.01%
Nitrate/Nitrite	5.55E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	3.01E+02								1.22E-02	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.22E-02	5.07E+02	2.41E-05	1.13E+03	1.08E-05	0.00%	0.00%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E-04	mg/kg	#######			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.38E-06	0	0.00E+00	1.62E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.64E-04	4.58E+00	3.58E-05	9.16E+00	1.79E-05	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.57E-04	mg/kg	#######			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	7.78E-06	0	0.00E+00	5.24E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.31E-04	2.40E-01	2.21E-03	2.40E+00	2.21E-04	0.02%	0.02%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	3.80E-01	mg/kg	#######			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	5.30E-03	0	0.00E+00	3.49E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.55E-01	2.40E-01	1.48E+00	2.40E+00	1.48E-01	15.23%	10.85%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	4.97E-02	mg/kg	#######			3.00E-01	NA	3.82E+01	3.82E+01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	6.94E-04	0	0.00E+00	1.60E-03	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.29E-03	8.50E+00	2.70E-04	2.55E+01	9.00E-05	0.00%	0.01%
Selenium	0.00E+00	mg/L	7.51E-01	mg/kg	3.70E-01	mg/kg	#######	2.05E+02	4.50E+00	1.21E+00	4.92E-01	4.59E-01	4.59E-01	1.51E-01	1.51E-01	0.00E+00	0.00E+00	5.17E-03	0	0.00E+00	4.83E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.34E-02	2.00E-01	2.67E-01	3.30E-01	1.62E-01	2.75%	11.89%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.30E+01	mg/kg	#######		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	1.81E-01	0	0.00E+00	1.21E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.03E-01	2.63E+02	1.15E-03	7.89E+02	3.84E-04	0.01%	0.03%
Sulfate	5.14E+00	mg/L	1.39E+01	mg/kg	1.38E+03	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	1.13E+00	0.00E+00	1.92E+01	0	0.00E+00	4.44E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.48E+01	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	6.14E-01	mg/kg	0.00E+00	mg/kg	#######	7.50E+01	4.50E+00							0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.40E-03	0.00E+00	7.40E-02	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.64E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.68E-06	0	0.00E+00	2.57E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.61E-04	4.58E+00	5.70E-05	9.16E+00	2.85E-05	0.00%	0.00%
Vanadium	2.64E-02	mg/L	0.00E+00	mg/kg	1.45E+01	mg/kg	#######	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	5.81E-03	0.00E+00	2.02E-01	0	0.00E+00	6.53E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.73E-01	2.10E-01	1.30E+00	2.10E+00	1.30E-01	13.41%	9.55%
Zinc	0.00E+00	mg/L	3.22E+01	mg/kg	4.80E+01	mg/kg	#######	2.91E+03	1.94E+00	6.34E+00	1.05E+00	8.84E-01	8.84E-01	1.84E-01	1.84E-01	0.00E+00	0.00E+00	6.69E-01	0	0.00E+00	3.27E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.33E+01	1.60E+02	2.08E-01	3.20E+02	1.04E-01	2.15%	7.65%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	2.5E-04	1.3E-04	0.00%	0.01%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	6.2E-03	1.2E-03	0.06%	0.09%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.8E-01	1.8E-02	1.83%	1.30%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	1.2E-02	1.3E-03	0.12%	0.10%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\,x\,Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	1	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.000209	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.001611	kg/d
Body weight =	0.015	kg
Home range =	0.963707	acres
Water intake rate =	0.0033	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-87
Tier 1 COPCs
EEQs and Hazard Indices for the Red Fox at LHAAP
Low Impact Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Total Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
								-----	-----	-----	-----Unitless-----	-----	-----	-----		mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	1.22E-08	mg/L	8.87E-06	mg/kg	3.95E-06	mg/kg	#######	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	1.03E-09	0.00E+00	3.74E-09	0	0.00E+00	8.90E-08	0.00E+00	7.28E-11	0.00E+00	5.69E-09	1.22E-09	1.01E-07	1.00E-06	1.01E-01	1.00E-05	1.01E-02	13.07%	9.33%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.42E-03	mg/kg	#######		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.34E-06	0	0.00E+00	2.23E-05	0.00E+00	4.60E-07	0.00E+00	3.86E-05	8.28E-06	7.10E-05	8.00E-01	8.87E-05	4.00E+00	1.77E-05	0.01%	0.02%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	4.15E-03	mg/kg	#######		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	3.93E-06	0	0.00E+00	6.55E-05	0.00E+00	1.04E-05	0.00E+00	9.74E-05	2.09E-05	1.98E-04	8.00E-01	2.48E-04	4.00E+00	4.96E-05	0.03%	0.05%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.82E-03	mg/kg	#######		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	0.00E+00	1.73E-06	0	0.00E+00	2.97E-05	0.00E+00	5.91E-07	0.00E+00	7.17E-05	1.54E-05	1.19E-04	8.00E-01	1.49E-04	4.00E+00	2.98E-05	0.02%	0.03%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.04E-04	mg/kg	#######			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.93E-07	0	0.00E+00	3.32E-06	0.00E+00	5.59E-09	0.00E+00	5.55E-06	1.19E-06	1.03E-05	2.00E-01	5.13E-05	1.00E+00	1.03E-05	0.01%	0.01%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.68E-04	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.49E-07	0	0.00E+00	5.88E-06	0.00E+00	6.02E-08	0.00E+00	1.00E-05	2.15E-06	1.85E-05	4.58E+00	4.03E-06	9.16E+00	2.02E-06	0.00%	0.00%
Aluminum	6.11E+00	mg/L	9.69E+03	mg/kg	0.00E+00	mg/kg	#######	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	5.16E-01	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.16E-01	1.93E+00	2.67E-01	1.93E+01	2.67E-02	34.67%	24.75%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.68E-01	mg/kg	#######			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	5.38E-04	0	0.00E+00	6.56E-04	0.00E+00	1.61E-04	0.00E+00	2.23E-03	4.78E-04	4.07E-03	1.25E-01	3.25E-02	1.25E+00	3.25E-03	4.22%	3.01%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.04E-03	mg/kg	#######			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.88E-06	0	0.00E+00	4.87E-05	0.00E+00	2.01E-06	0.00E+00	8.28E-05	1.77E-05	1.54E-04	6.85E-02	2.25E-03	6.85E-01	2.25E-04	0.29%	0.21%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.37E-03	mg/kg	#######			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.30E-06	0	0.00E+00	2.20E-05	0.00E+00	5.62E-08	0.00E+00	3.74E-05	8.01E-06	6.87E-05	6.80E-02	1.01E-03	6.90E-01	9.96E-05	0.13%	0.09%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.04E-03	mg/kg	#######		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	0.00E+00	3.83E-06	0	0.00E+00	6.64E-05	0.00E+00	1.45E-07	0.00E+00	1.01E-04	2.17E-05	1.94E-04	6.80E-02	2.85E-03	6.90E-01	2.80E-04	0.37%	0.26%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	6.22E-03	mg/kg	#######			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	5.90E-06	0	0.00E+00	1.08E-04	0.00E+00	1.15E-07	0.00E+00	2.82E-04	6.05E-05	4.56E-04	6.80E-02	6.71E-03	6.90E-01	6.61E-04	0.87%	0.61%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.97E-04	mg/kg	#######			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	8.50E-07	0	0.00E+00	1.27E-05	0.00E+00	1.91E-06	0.00E+00	2.44E-05	5.24E-06	4.52E-05	6.80E-02	6.64E-04	6.90E-01	6.55E-05	0.09%	0.06%
Barium	0.00E+00	mg/L	1.32E+02	mg/kg	0.00E+00	mg/kg	#######	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E+00	0.00E+00	1.98E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	2.50E-02	mg/kg	#######			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.37E-05	0	0.00E+00	3.36E-04	0.00E+00	3.26E-04	0.00E+00	6.82E-04	1.46E-04	1.51E-03	4.00E+00	3.78E-04	4.00E+01	3.78E-05	0.05%	0.04%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	2.49E-03	mg/L	5.48E-01	mg/kg	3.95E-01	mg/kg	#######	1.63E+03	7.99E+00	2.55E+01	8.11E-01	9.40E-01	9.40E-01	9.22E-01	9.22E-01	2.10E-04	0.00E+00	3.74E-04	0	0.00E+00	1.02E-02	0.00E+00	1.51E-03	0.00E+00	8.62E-03	1.85E-03	2.28E-02	1.00E+00	2.28E-02	1.00E+01	2.28E-03	2.95%	2.11%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.93E-04	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.83E-07	0	0.00E+00	3.08E-06	0.00E+00	3.16E-08	0.00E+00	5.26E-06	1.13E-06	9.69E-06	4.58E+00	2.12E-06	9.16E+00	1.06E-06	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.16E+01	mg/kg	#######	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	0.00E+00	0.00E+00	1.10E-02	0	0.00E+00	3.72E-02	0.00E+00	2.26E-02	0.00E+00	9.16E-02	1.96E-02	1.82E-01	3.28E+00	5.55E-02	1.31E+01	1.39E-02	7.20%	12.83%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.52E-04	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.39E-07	0	0.00E+00	4.03E-06	0.00E+00	4.12E-08	0.00E+00	6.87E-06	1.47E-06	1.27E-05	4.58E+00	2.76E-06	9.16E+00	1.38E-06	0.00%	0.00%
Copper	1.18E-02	mg/L	7.20E+00	mg/kg	7.35E+00	mg/kg	#######	5.92E+03	5.25E+00	1.33E+00	5.86E-01	5.79E-01	5.79E-01	1.49E-01	1.49E-01	9.97E-04	0.00E+00	6.97E-03	0	0.00E+00	9.90E-03	0.00E+00	1.72E-02	0.00E+00	2.60E-02	5.57E-03	6.67E-02	1.17E+01	5.70E-03	1.51E+01	4.40E-03	0.74%	4.07%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.88E-04	mg/kg	#######		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.79E-07	0	0.00E+00	2.92E-06	0.00E+00	1.25E-06	0.00E+00	5.14E-06	1.10E-06	1.06E-05	2.00E-02	5.29E-04	2.00E-01	5.29E-05	0.07%	0.05%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.77E-04	mg/kg	#######			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	2.62E-07	0	0.00E+00	4.29E-06	0.00E+00	4.29E-08	0.00E+00	7.97E-06	1.71E-06	1.43E-05	9.20E-02	1.55E-04	9.20E-01	1.55E-05	0.02%	0.01%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.36E-04	mg/kg	#######			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.24E-07	0	0.00E+00	3.71E-06	0.00E+00	1.81E-08	0.00E+00	6.43E-06	1.38E-06	1.18E-05	8.00E-02	1.47E-04	2.90E-01	4.06E-05	0.02%	0.04%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	5.98E+00	mg/L	0.00E+00	mg/kg	1.01E+04	mg/kg	#######	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	5.05E-01	0.00E+00	9.53E+00	0	0.00E+00	7.95E-01	0.00E+00	1.63E-01	0.00E+00	4.92E-01	1.05E-01	1.16E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	#######		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	5.18E-03	mg/L	0.00E+00	mg/kg	2.30E+01	mg/kg	#######	1.50E+03	6.07E-01	4.47E-01	NA	6.65E-02	6.65E-02	1.33E-02	1.33E-02	4.37E-04	0.00E+00	2.18E-02	0	0.00E+00	1.04E-02	NA	6.21E-03	0.00E+00	7.25E-03	1.55E-03	4.77E-02	8.00E+00	5.96E-03	8.00E+01	5.96E-04	0.77%	0.55%
Manganese	4.54E-01	mg/L	0.00E+00	mg/kg	9.62E+02	mg/kg	#######	2.00E+03	2.10E+00	2.20E-01	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	3.84E-02	0.00E+00	9.12E-01	0	0.00E+00	2.14E-01	0.00E+00	3.90E-01	0.00E+00	2.18E-01	4.67E-02	1.82E+00	8.80E+01	2.07E-02	2.84E+02	6.40E-03	2.68%	5.93%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.69E-02	mg/kg	#######		2.87E+00	7.38E+00	NA	1.38E+00	1.38E+00	1.03E-01	1.03E-01	0.00E+00	0.00E+00	5.39E-05	0	0.00E+00	4.25E-04	NA	3.17E-04	0.00E+00	1.38E-04	2.97E-05	9.64E-04	1.00E+00	9.64E-04	3.00E+00	3.21E-04	0.13%	0.30%
Mercury (methyl)	0.00E+00	mg/L	9.58E-02	mg/kg	0.00E+00	mg/kg	#######		2.87E+00	NA	1.08E+00	NA	NA			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	1.50E-02	0.00E+00	2.50E-02	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.43E-04	mg/kg	#######			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.25E-07	0	0.00E+00	5.64E-06	0.00E+00	4.78E-08	0.00E+00	9.35E-06	2.00E-06	1.74E-05	7.00E-02	2.48E-04	7.00E-01	2.48E-05	0.03%	0.02%
Nickel	0.00E+00	mg/L	9.33E+00	mg/kg	6.83E+00	mg/kg	#######		2.32E+00	4.73E+00	6.21E-02	6.72E-02	6.72E-02	1.01E-01	1.01E-01	0.00E+00	0.00E+00	6.47E-03	0	0.00E+00	3.27E-02	0.00E+00	1.86E-03	0.00E+00	1.63E-02	3.50E-03	6.09E-02	4.00E+01	1.52E-03	8.00E+01	7.61E-04	0.20%	0.70%
Nitrate	8.67E-01	mg/L	1.30E-01	mg/kg	1.86E+00	mg/kg	#######	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	7.32E-02	0.00E+00	1.77E-03	0	0.00E+00	2.15E-03	0.00E+00	2.64E-03	0.00E+00	7.32E-03	1.57E-03	8.87E-02	5.07E+02	1.75E-04	1.13E+03	7.85E-05	0.02%	0.07%
Nitrate/Nitrite	7.06E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	1.07E+03								5.96E-03	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.96E-03	5.07E+02	1.18E-05	1.13E+03	5.28E-06	0.00%	0.00%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.84E-04	mg/kg	#######			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.74E-07	0	0.00E+00	2.84E-06	0.00E+00	1.96E-08	0.00E+00	5.00E-06	1.07E-06	9.11E-06	4.58E+00	1.99E-06	9.16E+00	9.94E-07	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	9.03E-04	mg/kg	#######			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	8.55E-07	0	0.00E+00	1.39E-05	0.00E+00	1.22E-07	0.00E+00	2.46E-05	5.27E-06	4.47E-05	2.40E-01	1.86E-04	2.40E+00	1.86E-05	0.02%	0.02%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	5.32E-01	mg/kg	#######			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	5.04E-04	0	0.00E+00	8.01E-03	0.00E+00	1.52E-04	0.00E+00	1.45E-02	3.11E-03	2.63E-02	2.40E-01	1.09E-01	2.40E+00	1.09E-02	14.19%	10.13%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	9.01E-02	mg/kg	#######			1.14E+00	NA	2.99E+01	2.99E+01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	8.54E-05	0	0.00E+00	1.04E-04	NA	1.09E-02	0.00E+00	3.54E-04	7.59E-05	1.16E-02	8.50E+00	1.36E-03	2.55E+01	4.53E-04	0.18%	0.42%
Selenium	0.00E+00	mg/L	8.67E-01	mg/kg	3.97E-01	mg/kg	#######	2.05E+02	4.50E+00	1.19E+00	4.99E-01	4.62E-01	4.62E-01	1.95E-01	1.95E-01	0.00E+00	0.00E+00	3.76E-04	0	0.00E+00	4.79E-04	0.00E+00	7.44E-04	0.00E+00	1.83E-03	3.92E-04	3.82E-03	2.00E-01	1.91E-02	3.30E-01	1.16E-02	2.48%	10.72%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+01	mg/kg	#######		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	1.35E-02	0	0.00E+00	4.02E-03	0.00E+00	2.02E-02	0.00E+00	5.60E-02	1.20E-02	1.06E-01	2.63E+02	4.02E-04	7.89E+02	1.34E-04	0.05%	0.12%
Sulfate	6.09E+00	mg/L	2.00E+01	mg/kg	2.06E+03	mg/kg	#######	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	5.14E-01	0.00E+00	1.95E+00	0	0.00E+00	2.38E+00	0.00E+00	2.92E+00	0.00E+00	8.09E+00	1.73E+00	1.76E+01	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	7.12E-01	mg/kg	0.00E+00	mg/kg	#######	1.59E+04	4.50E+00							0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.40E-03	0.00E+00	7.40E-02	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.16E-04	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.99E-07	0	0.00E+00	5.04E-06	0.00E+00	5.16E-08	0.00E+00	8.61E-06	1.84E-06	1.58E-05	4.58E+00	3.46E-06	9.16E+00	1.73E-06	0.00%	0.00%
Vanadium	3.33E-02	mg/L	0.00E+00	mg/kg	1.54E+01	mg/kg	#######	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	2.81E-03	0.00E+00	1.46E-02	0	0.00E+00	1.37E-03	0.00E+00	2.49E-04	0.00E+00	2.15E-03	4.61E-04	2.16E-02	2.10E-01	1.03E-01	2.10E+00	1.03E-02	13.34%	9.52%
Zinc	0.00E+00	mg/L	3.82E+01	mg/kg	5.97E+01	mg/kg	#######	5.00E+03	7.53E+00	5.48E+00	9.78E-01	8.03E-01	8.03E-01	4.51E-01	4.51E-01	0.00E+00	0.00E+00	5.65E-02	0	0.00E+00	3.31E-01	0.00E+00	1.94E-01	0.00E+00	6.36E-01	1.36E-01	1.35E+00	1.60E+02	8.47E-03	3.20E+02	4.23E-03	1.10%	3.92%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.4E-05	7.2E-06	0.00%	0.01%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	4.9E-04	9.7E-05	0.06%	0.09%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.3E-02	1.3E-03	1.75%	1.23%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	7.4E-04	7.9E-05	0.10%	0.07%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0.12	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0.03	unitless
Mammal diet fraction =	0.7	unitless
Bird diet fraction =	0.15	unitless
Soil ingestion rate =	0.004263	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.152	kg/d
Body weight =	4.5	kg
Home range =	247.1044	acres
Water intake rate =	0.38	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-88
Tier 2 COPCs
EEQs and Hazard Indices for the Red Fox at LHAAP
Low Impact Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Total Soil Exposure Point Concentration	Units	Soil BAF (Unitless)	Fish BAF (Unitless)	Aq. Invert. BAF (Unitless)	Terr. Invert. BAF (Unitless)	Aq. Plant BAF (Unitless)	Terr. Plant BAF (Unitless)	Plant Root BAF (Unitless)	Mammal BAF (Unitless)	Bird BAF
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01
2,3,7,8-TCDD TEQ	1.07E-08	mg/L	5.59E-06	mg/kg	3.18E-06	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	8.25E-04	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	3.08E-03	mg/kg	1.00E+00		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E-03	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.81E-04	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.11E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Aluminum	4.16E+00	mg/L	8.09E+03	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.12E-01	mg/kg	1.00E+00			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.17E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	3.27E-03	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	4.04E-03	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.43E-04	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	2.19E-02	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01
Cadmium	2.09E-03	mg/L	4.57E-01	mg/kg	3.19E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	2.80E+01	8.80E-01	1.03E+00	1.03E+00	6.72E-01	6.72E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.16E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.09E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.19E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Copper	9.31E-03	mg/L	6.17E+00	mg/kg	6.48E+00	mg/kg	1.00E+00	1.11E+03	1.56E+00	1.46E+00	6.44E-01	6.25E-01	6.25E-01	8.97E-02	8.97E-02
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.64E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.04E-04	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01
Iron	4.18E+00	mg/L	0.00E+00	mg/kg	9.10E+03	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E+01	1.39E+01	1.39E+01		
Lead	4.09E-03	mg/L	0.00E+00	mg/kg	2.03E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	4.57E-01	NA	7.03E-02	7.03E-02	1.16E-02	1.16E-02
Manganese	3.17E-01	mg/L	0.00E+00	mg/kg	8.30E+02	mg/kg	1.00E+00	2.50E+02	4.20E-01	2.26E-01	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.07E-02	mg/kg	1.00E+00		1.14E+00	7.97E+00	NA	1.45E+00	1.45E+00	9.15E-02	9.15E-02
Mercury (methyl)	0.00E+00	mg/L	8.35E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	1.15E+00	NA	NA		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.87E-04	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01
Nickel	0.00E+00	mg/L	8.12E+00	mg/kg	6.19E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	6.43E-02	6.89E-02	6.89E-02	8.71E-02	8.71E-02
Nitrate	4.79E-01	mg/L	9.50E-02	mg/kg	1.13E+00	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Nitrate/Nitrite	5.55E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E-04	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.57E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	3.80E-01	mg/kg	1.00E+00			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	4.97E-02	mg/kg	1.00E+00			3.00E-01	NA	3.82E+01	3.82E+01	1.11E-01	1.11E-01
Selenium	0.00E+00	mg/L	7.51E-01	mg/kg	3.70E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.21E+00	4.92E-01	4.59E-01	4.59E-01	1.51E-01	1.51E-01
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.30E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Sulfate	5.14E+00	mg/L	1.39E+01	mg/kg	1.38E+03	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Thallium	0.00E+00	mg/L	6.14E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.64E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Vanadium	2.64E-02	mg/L	0.00E+00	mg/kg	1.45E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03
Zinc	0.00E+00	mg/L	3.22E+01	mg/kg	4.80E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	6.34E+00	1.05E+00	8.84E-01	8.84E-01	1.84E-01	1.84E-01

Chemical	EED Surface Water (mg/kg-d)	EED Sediment (mg/kg-d)	EED Soil (mg/kg-d)	EED Fish (mg/kg-d)	EED Aq. Invert. (mg/kg-d)	EED Terr. Invert. (mg/kg-d)	EED Aq. Plants (mg/kg-d)	EED Terr. Plants (mg/kg-d)	EED Plant Roots (mg/kg-d)	EED Mammals (mg/kg-d)	EED Birds (mg/kg-d)	Total EED (mg/kg-d)	NOAEL (mg/kg-d)	EEQ N	LOAEL (mg/kg-d)	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	9.01E-10	0.00E+00	3.01E-09	0	0.00E+00	3.55E-08	0.00E+00	5.00E-11	0.00E+00	3.56E-09	7.62E-10	4.38E-08	1.00E-06	4.38E-02	1.00E-05	4.38E-03	9.17%	6.57%
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	0.00E+00	7.82E-07	0	0.00E+00	7.48E-06	0.00E+00	9.36E-08	0.00E+00	1.71E-05	3.66E-06	2.91E-05	8.00E-01	3.64E-05	4.00E+00	7.28E-06	0.01%	0.01%
4,4'-DDE	0.00E+00	0.00E+00	2.92E-06	0	0.00E+00	2.81E-05	0.00E+00	1.70E-06	0.00E+00	6.87E-05	1.47E-05	1.16E-04	8.00E-01	1.45E-04	4.00E+00	2.90E-05	0.03%	0.04%
4,4'-DDT	0.00E+00	0.00E+00	1.04E-06	0	0.00E+00	1.03E-05	0.00E+00	1.25E-07	0.00E+00	2.31E-05	4.94E-06	3.95E-05	8.00E-01	4.94E-05	4.00E+00	9.88E-06	0.01%	0.01%
Aldrin	0.00E+00	0.00E+00	1.71E-07	0	0.00E+00	1.70E-06	0.00E+00	3.57E-09	0.00E+00	3.75E-06	8.04E-07	6.43E-06	2.00E-01	3.21E-05	1.00E+00	6.43E-06	0.01%	0.01%
alpha-Chlordane	0.00E+00	0.00E+00	2.95E-07	0	0.00E+00	2.87E-06	0.00E+00	1.18E-08	0.00E+00	6.45E-06	1.38E-06	1.10E-05	4.58E+00	2.40E-06	9.16E+00	1.20E-06	0.00%	0.00%
Aluminum	3.51E-01	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.51E-01	1.93E+00	1.82E-01	1.93E+01	1.82E-02	38.06%	27.28%
Antimony	0.00E+00	0.00E+00	4.85E-04	0	0.00E+00	1.56E-04	0.00E+00	7.68E-05	0.00E+00	1.34E-03	2.87E-04	2.34E-03	1.25E-01	1.88E-02	1.25E+00	1.88E-03	3.93%	2.81%
Aroclor 1242	0.00E+00	0.00E+00	2.40E-06	0	0.00E+00	2.34E-05	0.00E+00	8.61E-08	0.00E+00	5.25E-05	1.12E-05	8.96E-05	6.85E-02	1.31E-03	6.85E-01	1.31E-04	0.27%	0.20%
Aroclor 1248	0.00E+00	0.00E+00	1.11E-06	0	0.00E+00	1.08E-05	0.00E+00	3.98E-08	0.00E+00	2.43E-05	5.20E-06	4.14E-05	6.80E-02	6.09E-04	6.90E-01	6.00E-05	0.13%	0.09%
Aroclor 1254	0.00E+00	0.00E+00	3.10E-06	0	0.00E+00	3.10E-05	0.00E+00	4.75E-08	0.00E+00	3.85E-05	8.25E-06	8.09E-05	6.80E-02	1.19E-03	6.90E-01	1.17E-04	0.25%	0.18%
Aroclor 1260	0.00E+00	0.00E+00	3.82E-06	0	0.00E+00	4.02E-05	0.00E+00	1.05E-08	0.00E+00	1.59E-04	3.42E-05	2.38E-04	6.80E-02	3.49E-03	6.90E-01	3.44E-04	0.73%	0.52%
Aroclor 1268	0.00E+00	0.00E+00	7.99E-07	0	0.00E+00	6.90E-06	0.00E+00	1.80E-06	0.00E+00	1.75E-05	3.74E-06	3.07E-05	6.80E-02	4.52E-04	6.90E-01	4.45E-05	0.09%	0.07%
Barium	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E+00	0.00E+00	1.98E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	0.00E+00	2.08E-05	0	0.00E+00	1.70E-04	0.00E+00	2.86E-04	0.00E+00	4.54E-04	9.73E-05	1.03E-03	4.00E+00	2.57E-04	4.00E+01	2.57E-05	0.05%	0.04%
bis(2-ethylhexyl)phthalate	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	1.76E-04	0.00E+00	3.03E-04	0	0.00E+00	9.08E-03	0.00E+00	1.34E-03	0.00E+00	5.08E-03	1.09E-03	1.71E-02	1.00E+00	1.71E-02	1.00E+01	1.71E-03	3.57%	2.56%
Chlordane	0.00E+00	0.00E+00	2.04E-07	0	0.00E+00	1.99E-06	0.00E+00	8.15E-09	0.00E+00	4.47E-06	9.57E-07	7.62E-06	4.58E+00	1.66E-06	9.16E+00	8.32E-07	0.00%	0.00%
Chromium	0.00E+00	0.00E+00	1.03E-02	0	0.00E+00	3.37E-03	0.00E+00	1.81E-03	0.00E+00	2.17E-02	4.66E-03	4.19E-02	3.28E+00	1.28E-02	1.31E+01	3.19E-03	2.67%	4.78%
cis-Nonachlor	0.00E+00	0.00E+00	2.08E-07	0	0.00E+00	2.02E-06	0.00E+00	8.30E-09	0.00E+00	4.55E-06	9.75E-07	7.76E-06	4.58E+00	1.69E-06	9.16E+00	8.47E-07	0.00%	0.00%
Copper	7.86E-04	0.00E+00	6.14E-03	0	0.00E+00	9.60E-03	0.00E+00	1.64E-02	0.00E+00	1.37E-02	2.95E-03	4.96E-02	1.17E+01	4.24E-03	1.51E+01	3.28E-03	0.89%	4.92%
Dieldrin	0.00E+00	0.00E+00	1.67E-07	0	0.00E+00	1.57E-06	0.00E+00	1.71E-08	0.00E+00	3.65E-06	7.82E-07	6.19E-06	2.00E-02	3.09E-04	2.00E-01	3.09E-05	0.06%	0.05%
Endrin	0.00E+00	0.00E+00	2.50E-07	0	0.00E+00	2.36E-06	0.00E+00	2.94E-08	0.00E+00	7.59E-06	1.63E-06	1.19E-05	9.20E-02	1.29E-04	9.20E-01	1.29E-05	0.03%	0.02%
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	0.00E+00	1.93E-07	0	0.00E+00	1.85E-06	0.00E+00	1.31E-08	0.00E+00	4.23E-06	9.06E-07	7.19E-06	8.00E-02	8.99E-05	2.90E-01	2.48E-05	0.02%	0.04%
HMX	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	3.53E-01	0.00E+00	8.62E+00	0	0.00E+00	3.32E-01	0.00E+00	1.48E-01	0.00E+00	3.78E-01	8.11E-02	9.91E+00	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	3.45E-04	0.00E+00	1.93E-02	0	0.00E+00	9.42E-03	NA	5.79E-03	0.00E+00	5.60E-03	1.20E-03	4.16E-02	8.00E+00	5.20E-03	8.00E+01	5.20E-04	1.09%	0.78%
Manganese	2.67E-02	0.00E+00	7.86E-01	0	0.00E+00	1.90E-01	0.00E+00	2.66E-01	0.00E+00	1.49E-01	3.19E-02	1.45E+00	8.80E+01	1.65E-02	2.84E+02	5.10E-03	3.45%	7.66%
Mercury (inorganic)	0.00E+00	0.00E+00	4.80E-05	0	0.00E+00	4.09E-04	NA	2.98E-04	0.00E+00	1.10E-04	2.35E-05	8.89E-04	1.00E+00	8.89E-04	3.00E+00	2.96E-04	0.19%	0.44%
Mercury (methyl)	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	1.50E-02	0.00E+00	2.50E-02	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	0.00E+00	2.72E-07	0	0.00E+00	2.72E-06	0.00E+00	4.00E-09	0.00E+00	5.95E-06	1.27E-06	1.02E-05	7.00E-02	1.46E-04	7.00E-01	1.46E-05	0.03%	0.02%
Nickel	0.00E+00	0.00E+00	5.86E-03	0	0.00E+00	6.64E-03	0.00E+00	1.73E-03	0.00E+00	1.27E-02	2.73E-03	2.97E-02	4.00E+01	7.42E-04	8.00E+01	3.71E-04	0.16%	0.56%
Nitrate	4.04E-02	0.00E+00	1.07E-03	0	0.00E+00	3.43E-04	0.00E+00	9.60E-04	0.00E+00	2.95E-03	6.33E-04	4.64E-02	5.07E+02	9.15E-05	1.13E+03	4.11E-05	0.02%	0.06%
Nitrate/Nitrite	4.69E-03	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.69E-03	5.07E+02	9.24E-06	1.13E+03	4.15E-06	0.00%	0.01%
Oxychlordane	0.00E+00	0.00E+00	1.62E-07	0	0.00E+00	1.52E-06	0.00E+00	1.82E-08	0.00E+00	3.54E-06	7.58E-07	6.00E-06	4.58E+00	1.31E-06	9.16E+00	6.55E-07	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	0.00E+00	5.28E-07	0	0.00E+00	4.94E-06	0.00E+00	6.19E-08	0.00E+00	1.15E-05	2.47E-06	1.95E-05	2.40E-01	8.14E-05	2.40E+00	8.14E-06	0.02%	0.01%
Pentachlorophenol	0.00E+00	0.00E+00	3.60E-04	0	0.00E+00	3.29E-03	0.00E+00	6.55E-05	0.00E+00	7.87E-03	1.69E-03	1.33E-02	2.40E-01	5.53E-02	2.40E+00	5.53E-03	11.58%	8.30%
Perchlorate	0.00E+00	0.00E+00	4.71E-05	0	0.00E+00	1.51E-05	NA	7.70E-03	0.00E+00	1.30E-04	2.79E-05	7.92E-03	8.50E+00	9.32E-04	2.55E+01	3.11E-04	0.19%	0.47%
Selenium	0.00E+00	0.00E+00	3.51E-04	0	0.00E+00	4.55E-04	0.00E+00	6.89E-04	0.00E+00	1.32E-03	2.83E-04	3.10E-03	2.00E-01	1.55E-02	3.30E-01	9.40E-03	3.24%	14.10%
Silver	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	0.00E+00	1.23E-02	0	0.00E+00	1.15E-03	0.00E+00	1.11E-02	0.00E+00	3.40E-02	7.29E-03	6.58E-02	2.63E+02	2.50E-04	7.89E+02	8.34E-05	0.05%	0.13%
Sulfate	4.34E-01	0.00E+00	1.30E+00	0	0.00E+00	4.19E-01	0.00E+00	1.17E+00	0.00E+00	3.61E+00	7.73E-01	7.71E+00	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.40E-03	0.00E+00	7.40E-02	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	0.00E+00	2.50E-07	0	0.00E+00	2.43E-06	0.00E+00	9.96E-09	0.00E+00	5.46E-06	1.17E-06	9.32E-06	4.58E+00	2.03E-06	9.16E+00	1.02E-06	0.00%	0.00%
Vanadium	2.23E-03	0.00E+00	1.37E-02	0	0.00E+00	6.16E-04	0.00E+00	2.11E-04	0.00E+00	1.88E-03	4.02E-04	1.90E-02	2.10E-01	9.07E-02	2.10E+00	9.07E-03	18.98%	13.61%
Zinc	0.00E+00	0.00E+00	4.54E-02	0	0.00E+00	3.08E-01	0.00E+00	1.72E-01	0.00E+00	2.09E-01	4.47E-02	7.79E-01	1.60E+02	4.87E-03	3.20E+02	2.43E-03	1.02%	3.65%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	9.1E-06	4.6E-06	0.00%	0.01%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	2.3E-04	4.6E-05	0.05%	0.07%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	7.1E-03	7.0E-04	1.48%	1.05%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	4.7E-04	5.0E-05	0.10%	0.08%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text tables.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Unit
Terrestrial plant diet fraction =	0.12	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0.03	unitless
Mammal diet fraction =	0.7	unitless
Bird diet fraction =	0.15	unitless
Soil ingestion rate =	0.004263	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.152	kg/d
Body weight =	4.5	kg
Home range =	2565	acres
Water intake rate =	0.38	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-89
Tier 1 COPCs
EEQs and Hazard Indices for the Muskrat at LHAAP
Low Impact Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							---Unitless---									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	1.22E-08	mg/L	8.87E-06	mg/kg	3.95E-06	mg/kg	#######	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	1.18E-09	6.11E-08	0.00E+00	0	0.00E+00	0.00E+00	1.33E-09	1.32E-10	1.33E-09	0.00E+00	0.00E+00	6.51E-08	1.00E-06	6.51E-02	1.00E-05	6.51E-03	0.17%	0.15%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.40E-03	mg/kg	#######		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	8.22E-07	0.00E+00	0.00E+00	0.00E+00	8.22E-07	8.00E-01	1.03E-06	4.00E+00	2.06E-07	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	4.30E-03	mg/kg	#######		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.96E-05	0.00E+00	0.00E+00	0.00E+00	1.96E-05	8.00E-01	2.44E-05	4.00E+00	4.89E-06	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.23E-03	mg/kg	#######		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.31E-06	0.00E+00	0.00E+00	0.00E+00	1.31E-06	8.00E-01	1.64E-06	4.00E+00	3.27E-07	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.87E-04	mg/kg	#######			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	9.30E-09	0.00E+00	0.00E+00	0.00E+00	9.30E-09	2.00E-01	4.65E-08	1.00E+00	9.30E-09	0.00%	0.00%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.76E-04	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.11E-07	0.00E+00	0.00E+00	0.00E+00	1.11E-07	4.58E+00	2.43E-08	9.16E+00	1.21E-08	0.00%	0.00%
Aluminum	6.11E+00	mg/L	9.69E+03	mg/kg	0.00E+00	mg/kg	#######	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	5.93E-01	6.68E+01	0.00E+00	0	0.00E+00	0.00E+00	7.36E-01	0.00E+00	7.36E-01	0.00E+00	0.00E+00	6.89E+01	1.93E+00	3.57E+01	1.93E+01	3.57E+00	92.16%	83.05%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	6.37E-01	mg/kg	#######			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	3.27E-04	0.00E+00	0.00E+00	0.00E+00	3.27E-04	1.25E-01	2.62E-03	1.25E+00	2.62E-04	0.01%	0.01%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.07E-03	mg/kg	#######			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	3.67E-06	0.00E+00	0.00E+00	0.00E+00	3.67E-06	6.85E-02	5.36E-05	6.85E-01	5.36E-06	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.42E-03	mg/kg	#######			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.05E-07	0.00E+00	0.00E+00	0.00E+00	1.05E-07	6.80E-02	1.55E-06	6.80E-01	1.55E-07	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.11E-03	mg/kg	#######		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	2.67E-07	0.00E+00	0.00E+00	0.00E+00	2.67E-07	6.80E-02	3.92E-06	6.80E-01	3.92E-07	0.00%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	7.47E-03	mg/kg	#######			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	2.49E-07	0.00E+00	0.00E+00	0.00E+00	2.49E-07	6.80E-02	3.66E-06	6.80E-01	3.66E-07	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.50E-04	mg/kg	#######			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	3.28E-06	0.00E+00	0.00E+00	0.00E+00	3.28E-06	6.80E-02	4.82E-05	6.80E-01	4.82E-06	0.00%	0.00%
Barium	0.00E+00	mg/L	1.32E+02	mg/kg	0.00E+00	mg/kg	#######	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	9.12E-01	0.00E+00	0	0.00E+00	0.00E+00	4.02E+00	0.00E+00	4.02E+00	0.00E+00	0.00E+00	8.95E+00	5.10E+00	1.75E+00	1.98E+01	4.52E-01	4.53%	10.51%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	6.80E-02	mg/kg	#######			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.60E-03	0.00E+00	0.00E+00	0.00E+00	1.60E-03	4.00E+00	4.01E-04	4.00E+01	4.01E-05	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	2.49E-03	mg/L	5.48E-01	mg/kg	3.84E-01	mg/kg	#######	1.63E+03	7.99E+00	2.58E+01	8.11E-01	9.52E-01	8.11E-01	9.22E-01	9.22E-01	2.42E-04	3.78E-03	0.00E+00	0	0.00E+00	0.00E+00	1.47E-02	2.68E-03	1.47E-02	0.00E+00	0.00E+00	3.60E-02	1.00E+00	3.60E-02	1.00E+01	3.60E-03	0.09%	0.08%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.88E-04	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	5.55E-08	0.00E+00	0.00E+00	0.00E+00	5.55E-08	4.58E+00	1.21E-08	9.16E+00	6.05E-09	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.22E+01	mg/kg	#######	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	4.31E-02	0.00E+00	0.00E+00	0.00E+00	4.31E-02	3.28E+00	1.31E-02	1.31E+01	3.28E-03	0.03%	0.08%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-04	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	7.32E-08	0.00E+00	0.00E+00	0.00E+00	7.32E-08	4.58E+00	1.60E-08	9.16E+00	7.99E-09	0.00%	0.00%
Copper	1.18E-02	mg/L	7.20E+00	mg/kg	7.43E+00	mg/kg	#######	5.92E+03	5.25E+00	1.32E+00	5.86E-01	5.75E-01	5.86E-01	1.49E-01	1.49E-01	1.15E-03	4.96E-02	0.00E+00	0	0.00E+00	0.00E+00	1.39E-01	3.13E-02	1.39E-01	0.00E+00	0.00E+00	3.61E-01	1.17E+01	3.08E-02	1.51E+01	2.38E-02	0.08%	0.55%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.86E-04	mg/kg	#######		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	2.23E-06	0.00E+00	0.00E+00	0.00E+00	2.23E-06	2.00E-02	1.12E-04	2.00E-01	1.12E-05	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.75E-04	mg/kg	#######			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	7.72E-08	0.00E+00	0.00E+00	0.00E+00	7.72E-08	9.20E-02	8.39E-07	9.20E-01	8.39E-08	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.20E-04	mg/kg	#######			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	3.05E-08	0.00E+00	0.00E+00	0.00E+00	3.05E-08	8.00E-02	3.81E-07	2.90E-01	1.05E-07	0.00%	0.00%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	5.98E+00	mg/L	0.00E+00	mg/kg	1.00E+04	mg/kg	#######	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	5.80E-01	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	2.94E-01	0.00E+00	0.00E+00	0.00E+00	8.75E-01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	#######		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	4.21E-04	0.00E+00	0	0.00E+00	0.00E+00	2.84E-02	0.00E+00	2.84E-02	0.00E+00	0.00E+00	5.71E-02	NA	NA	NA	NA	NA	NA
Lead	5.18E-03	mg/L	0.00E+00	mg/kg	2.51E+01	mg/kg	#######	1.50E+03	6.07E-01	4.39E-01	NA	6.40E-02	NA	1.33E-02	1.33E-02	5.03E-04	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	NA	1.18E-02	NA	0.00E+00	0.00E+00	1.23E-02	8.00E+00	1.54E-03	8.00E+01	1.54E-04	0.00%	0.00%
Manganese	4.54E-01	mg/L	0.00E+00	mg/kg	9.35E+02	mg/kg	#######	2.00E+03	2.10E+00	2.21E-01	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	4.41E-02	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	6.86E-01	0.00E+00	0.00E+00	0.00E+00	7.30E-01	8.80E+01	8.30E-03	2.84E+02	2.57E-03	0.02%	0.06%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.95E-02	mg/kg	#######		2.87E+00	7.16E+00	NA	1.35E+00	NA	1.03E-01	1.03E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	NA	5.88E-04	NA	0.00E+00	0.00E+00	5.88E-04	1.32E+01	4.45E-05	3.96E+01	1.48E-05	0.00%	0.00%
Mercury (methyl)	0.00E+00	mg/L	9.58E-02	mg/kg	0.00E+00	mg/kg	#######		2.87E+00	NA	1.08E+00	NA	1.08E+00			0.00E+00	6.60E-04	0.00E+00	0	0.00E+00	NA	3.42E-03	NA	3.42E-03	0.00E+00	0.00E+00	7.50E-03	3.20E-02	2.34E-01	1.60E-01	4.69E-02	0.61%	1.09%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.41E-04	mg/kg	#######			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	8.60E-08	0.00E+00	0.00E+00	0.00E+00	8.60E-08	7.00E-02	1.23E-06	7.00E-01	1.23E-07	0.00%	0.00%
Nickel	0.00E+00	mg/L	9.33E+00	mg/kg	7.10E+00	mg/kg	#######		2.32E+00	4.73E+00	6.21E-02	6.65E-02	6.21E-02	1.01E-01	1.01E-01	0.00E+00	6.43E-02	0.00E+00	0	0.00E+00	0.00E+00	1.91E-02	3.47E-03	1.91E-02	0.00E+00	0.00E+00	1.06E-01	4.00E+01	2.65E-03	8.00E+01	1.33E-03	0.01%	0.03%
Nitrate	8.67E-01	mg/L	1.30E-01	mg/kg	0.00E+00	mg/kg	#######	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	8.42E-02	8.94E-04	0.00E+00	0	0.00E+00	0.00E+00	1.50E-03	0.00E+00	1.50E-03	0.00E+00	0.00E+00	8.81E-02	5.07E+02	1.74E-04	1.13E+03	7.80E-05	0.00%	0.00%
Nitrate/Nitrite	7.06E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	1.07E+03								6.86E-03	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.86E-03	5.07E+02	1.35E-05	1.13E+03	6.07E-06	0.00%	0.00%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	#######			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	3.40E-08	0.00E+00	0.00E+00	0.00E+00	3.40E-08	4.58E+00	7.42E-09	9.16E+00	3.71E-09	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	8.83E-04	mg/kg	#######			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	2.17E-07	0.00E+00	0.00E+00	0.00E+00	2.17E-07	2.40E-01	9.03E-07	2.40E+00	9.03E-08	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	4.23E-01	mg/kg	#######			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	2.19E-04	0.00E+00	0.00E+00	0.00E+00	2.19E-04	2.40E-01	9.11E-04	2.40E+00	9.11E-05	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.80E-01	mg/kg	#######			1.14E+00	NA	1.88E+01	1.88E+01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	NA	3.86E-02	0.00E+00	0.00E+00	0.00E+00	3.86E-02	8.50E+00	4.54E-03	2.55E+01	1.51E-03	0.01%	0.04%
Selenium	0.00E+00	mg/L	8.67E-01	mg/kg	4.13E-01	mg/kg	#######	2.05E+02	4.50E+00	1.18E+00	4.99E-01	4.64E-01	4.99E-01	1.95E-01	1.95E-01	0.00E+00	5.97E-03	0.00E+00	0	0.00E+00	0.00E+00	1.43E-02	1.40E-03	1.43E-02	0.00E+00	0.00E+00	3.59E-02	2.00E-01	1.80E-01	3.30E-01	1.09E-01	0.46%	2.53%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+01	mg/kg	#######		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	3.66E-02	0.00E+00	0.00E+00	0.00E+00	3.66E-02	2.63E+02	1.39E-04	7.89E+02	4.64E-05	0.00%	0.00%
Sulfate	6.09E+00	mg/L	2.00E+01	mg/kg	2.30E+02	mg/kg	#######	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	5.92E-01	1.38E-01	0.00E+00	0	0.00E+00	0.00E+00	2.31E-01	5.90E-01	2.31E-01	0.00E+00	0.00E+00	1.78E+00	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	7.12E-01	mg/kg	0.00E+00	mg/kg	#######	1.59E+04	4.50E+00							0.00E+00	4.91E-03	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.91E-03	7.40E-03	6.63E-01	7.40E-02	6.63E-02	1.71%	1.54%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.04E-04	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	8.98E-08	0.00E+00	0.00E+00	0.00E+00	8.98E-08	4.58E+00	1.96E-08	9.16E+00	9.80E-09	0.00%	0.00%
Vanadium	3.33E-02	mg/L	0.00E+00	mg/kg	1.53E+01	mg/kg	#######	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	3.23E-03	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	4.50E-04	0.00E+00	0.00E+00	0.00E+00	3.68E-03	2.10E-01	1.75E-02	2.10E+00	1.75E-03	0.05%	0.04%
Zinc	0.00E+00	mg/L	3.82E+01	mg/kg	5.89E+01	mg/kg	#######	5.00E+03	7.53E+00	5.53E+00	9.78E-01	8.08E-01	9.78E-01	4.51E-01	4.51E-01	0.00E+00	2.63E-01	0.00E+00	0	0.00E+00	0.00E+00	1.23E+00	3.49E-01	1.23E+00	0.00E+00	0.00E+00	3.08E+00	1.60E+02	1.92E-02	3.20E+02	9.61E-03	0.05%	0.22%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	7.9E-08	4.0E-08	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	2.7E-05	5.4E-06	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.1E-04	1.1E-05	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	1.1E-04	1.1E-05	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text tables.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0.1	unitless
Aquatic plant diet fraction =	0.45	unitless
Plant root diet fraction =	0.45	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0.008093	kg/d
Food ingestion rate =	0.0861	kg/d
Body weight =	1.174	kg
Home range =	0.11861	acres
Water intake rate =	0.114	L/d
Site Area =	262	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-90
Tier 2 COPCs
EEQs and Hazard Indices for the Muskrat at LHAAP
Low Impact Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
									Unitless						
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01
2,3,7,8-TCDD TEQ	1.07E-08	mg/L	5.59E-06	mg/kg	3.18E-06	mg/kg	#######	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	8.00E-04	mg/kg	#######		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	3.10E-03	mg/kg	#######		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.07E-03	mg/kg	#######		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	#######			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.15E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Aluminum	4.16E+00	mg/L	8.09E+03	mg/kg	0.00E+00	mg/kg	#######	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-01	mg/kg	#######			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.55E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.21E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	3.32E-03	mg/kg	#######		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	4.07E-03	mg/kg	#######			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	7.92E-04	mg/kg	#######			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	0.00E+00	mg/kg	#######	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	5.10E-02	mg/kg	#######			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01
Cadmium	2.09E-03	mg/L	4.57E-01	mg/kg	3.02E-01	mg/kg	#######	1.15E+03	6.00E-01	2.87E+01	8.80E-01	1.06E+00	8.80E-01	6.72E-01	6.72E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E+01	mg/kg	#######	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Copper	9.31E-03	mg/L	6.17E+00	mg/kg	6.53E+00	mg/kg	#######	1.11E+03	1.56E+00	1.45E+00	6.44E-01	6.22E-01	6.44E-01	8.97E-02	8.97E-02
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.72E-04	mg/kg	#######		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-04	mg/kg	#######			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.93E-04	mg/kg	#######			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01
Iron	4.18E+00	mg/L	0.00E+00	mg/kg	9.10E+03	mg/kg	#######	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	#######		4.67E+00		1.39E+01	1.39E+01	1.39E+01		
Lead	4.09E-03	mg/L	0.00E+00	mg/kg	2.21E+01	mg/kg	#######	4.48E+02	7.10E-02	4.50E-01	NA	6.78E-02	NA	1.16E-02	1.16E-02
Manganese	3.17E-01	mg/L	0.00E+00	mg/kg	8.30E+02	mg/kg	#######	2.50E+02	4.20E-01	2.26E-01	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-02	mg/kg	#######		1.14E+00	7.64E+00	NA	1.41E+00	NA	9.15E-02	9.15E-02
Mercury (methyl)	0.00E+00	mg/L	8.35E-02	mg/kg	0.00E+00	mg/kg	#######		1.14E+00	NA	1.15E+00	NA	1.15E+00		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.88E-04	mg/kg	#######			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01
Nickel	0.00E+00	mg/L	8.12E+00	mg/kg	6.36E+00	mg/kg	#######		4.86E-01	1.06E+00	6.43E-02	6.84E-02	6.43E-02	8.71E-02	8.71E-02
Nitrate	4.79E-01	mg/L	9.50E-02	mg/kg	0.00E+00	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Nitrate/Nitrite	5.55E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	3.01E+02							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E-04	mg/kg	#######			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.62E-04	mg/kg	#######			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-01	mg/kg	#######			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	7.70E-02	mg/kg	#######			3.00E-01	NA	3.19E+01	3.19E+01	1.11E-01	1.11E-01
Selenium	0.00E+00	mg/L	7.51E-01	mg/kg	3.74E-01	mg/kg	#######	2.05E+02	4.50E+00	1.21E+00	4.92E-01	4.59E-01	4.92E-01	1.51E-01	1.51E-01
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.50E+00		1.40E-02	1.40E-02	1.40E-02		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.30E+01	mg/kg	#######		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Sulfate	5.14E+00	mg/L	1.39E+01	mg/kg	1.30E+02	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Thallium	0.00E+00	mg/L	6.14E-01	mg/kg	0.00E+00	mg/kg	#######	7.50E+01	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Vanadium	2.64E-02	mg/L	0.00E+00	mg/kg	1.45E+01	mg/kg	#######	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03
Zinc	0.00E+00	mg/L	3.22E+01	mg/kg	4.79E+01	mg/kg	#######	2.91E+03	1.94E+00	6.34E+00	1.05E+00	8.84E-01	1.05E+00	1.84E-01	1.84E-01

Chemical	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	1.04E-09	3.85E-08	0.00E+00	0	0.00E+00	0.00E+00	7.15E-10	9.04E-11	7.15E-10	0.00E+00	0.00E+00	4.11E-08	1.00E-06	4.11E-02	1.00E-05	4.11E-03	0.13%	0.12%
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.64E-07	0.00E+00	0.00E+00	0.00E+00	1.64E-07	8.00E-01	2.05E-07	4.00E+00	4.11E-08	0.00%	0.00%
4,4'-DDE	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	3.09E-06	0.00E+00	0.00E+00	0.00E+00	3.09E-06	8.00E-01	3.87E-06	4.00E+00	7.73E-07	0.00%	0.00%
4,4'-DDT	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	2.19E-07	0.00E+00	0.00E+00	0.00E+00	2.19E-07	8.00E-01	2.74E-07	4.00E+00	5.48E-08	0.00%	0.00%
Aldrin	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	6.27E-09	0.00E+00	0.00E+00	0.00E+00	6.27E-09	2.00E-01	3.14E-08	1.00E+00	6.27E-09	0.00%	0.00%
alpha-Chlordane	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	2.16E-08	0.00E+00	0.00E+00	0.00E+00	2.16E-08	4.58E+00	4.71E-09	9.16E+00	2.35E-09	0.00%	0.00%
Aluminum	4.04E-01	5.58E+01	0.00E+00	0	0.00E+00	0.00E+00	4.00E-01	0.00E+00	4.00E-01	0.00E+00	0.00E+00	5.70E+01	1.93E+00	2.95E+01	1.93E+01	2.95E+00	95.20%	89.66%
Antimony	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.38E-04	0.00E+00	0.00E+00	0.00E+00	1.38E-04	1.25E-01	1.11E-03	1.25E+00	1.11E-04	0.00%	0.00%
Aroclor 1242	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.57E-07	0.00E+00	0.00E+00	0.00E+00	1.57E-07	6.85E-02	2.29E-06	6.85E-01	2.29E-07	0.00%	0.00%
Aroclor 1248	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	7.43E-08	0.00E+00	0.00E+00	0.00E+00	7.43E-08	6.80E-02	1.09E-06	6.80E-01	1.09E-07	0.00%	0.00%
Aroclor 1254	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	8.70E-08	0.00E+00	0.00E+00	0.00E+00	8.70E-08	6.80E-02	1.28E-06	6.80E-01	1.28E-07	0.00%	0.00%
Aroclor 1260	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.92E-08	0.00E+00	0.00E+00	0.00E+00	1.92E-08	6.80E-02	2.82E-07	6.80E-01	2.82E-08	0.00%	0.00%
Aroclor 1268	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	3.06E-06	0.00E+00	0.00E+00	0.00E+00	3.06E-06	6.80E-02	4.50E-05	6.80E-01	4.50E-06	0.00%	0.00%
Barium	0.00E+00	8.14E-01	0.00E+00	0	0.00E+00	0.00E+00	6.08E-01	0.00E+00	6.08E-01	0.00E+00	0.00E+00	2.03E+00	5.10E+00	3.98E-01	1.98E+01	1.03E-01	1.28%	3.11%
Benzoic Acid	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.20E-03	0.00E+00	0.00E+00	0.00E+00	1.20E-03	4.00E+00	3.01E-04	4.00E+01	3.01E-05	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	2.02E-04	3.15E-03	0.00E+00	0	0.00E+00	0.00E+00	1.33E-02	2.35E-03	1.33E-02	0.00E+00	0.00E+00	3.23E-02	1.00E+00	3.23E-02	1.00E+01	3.23E-03	0.10%	0.10%
Chlordane	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.18E-08	0.00E+00	0.00E+00	0.00E+00	1.18E-08	4.58E+00	2.58E-09	9.16E+00	1.29E-09	0.00%	0.00%
Chromium	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	3.31E-03	0.00E+00	0.00E+00	0.00E+00	3.31E-03	3.28E+00	1.01E-03	1.31E+01	2.52E-04	0.00%	0.01%
cis-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.45E-08	0.00E+00	0.00E+00	0.00E+00	1.45E-08	4.58E+00	3.17E-09	9.16E+00	1.58E-09	0.00%	0.00%
Copper	9.04E-04	4.25E-02	0.00E+00	0	0.00E+00	0.00E+00	1.31E-01	2.98E-02	1.31E-01	0.00E+00	0.00E+00	3.35E-01	1.17E+01	2.87E-02	1.51E+01	2.22E-02	0.09%	0.67%
Dieldrin	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	3.03E-08	0.00E+00	0.00E+00	0.00E+00	3.03E-08	2.00E-02	1.51E-06	2.00E-01	1.51E-07	0.00%	0.00%
Endrin	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	4.78E-08	0.00E+00	0.00E+00	0.00E+00	4.78E-08	9.20E-02	5.20E-07	9.20E-01	5.20E-08	0.00%	0.00%
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	2.25E-08	0.00E+00	0.00E+00	0.00E+00	2.25E-08	8.00E-02	2.81E-07	2.90E-01	7.76E-08	0.00%	0.00%
HMX	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	4.05E-01	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	2.67E-01	0.00E+00	0.00E+00	0.00E+00	6.72E-01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	4.21E-04	0.00E+00	0	0.00E+00	0.00E+00	2.80E-02	0.00E+00	2.80E-02	0.00E+00	0.00E+00	5.64E-02	NA	NA	NA	NA	NA	NA
Lead	3.97E-04	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	NA	1.10E-02	NA	0.00E+00	0.00E+00	1.14E-02	8.00E+00	1.42E-03	8.00E+01	1.42E-04	0.00%	0.00%
Manganese	3.07E-02	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	4.81E-01	0.00E+00	0.00E+00	0.00E+00	5.11E-01	8.80E+01	5.81E-03	2.84E+02	1.80E-03	0.02%	0.05%
Mercury (inorganic)	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	NA	5.58E-04	NA	0.00E+00	0.00E+00	5.58E-04	1.32E+01	4.23E-05	3.96E+01	1.41E-05	0.00%	0.00%
Mercury (methyl)	0.00E+00	5.75E-04	0.00E+00	0	0.00E+00	NA	3.18E-03	NA	3.18E-03	0.00E+00	0.00E+00	6.93E-03	3.20E-02	2.16E-01	1.60E-01	4.33E-02	0.70%	1.31%
Mirex	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	7.27E-09	0.00E+00	0.00E+00	0.00E+00	7.27E-09	7.00E-02	1.04E-07	7.00E-01	1.04E-08	0.00%	0.00%
Nickel	0.00E+00	5.60E-02	0.00E+00	0	0.00E+00	0.00E+00	1.72E-02	3.19E-03	1.72E-02	0.00E+00	0.00E+00	9.37E-02	4.00E+01	2.34E-03	8.00E+01	1.17E-03	0.01%	0.04%
Nitrate	4.65E-02	6.55E-04	0.00E+00	0	0.00E+00	0.00E+00	6.58E-04	0.00E+00	6.58E-04	0.00E+00	0.00E+00	4.85E-02	5.07E+02	9.56E-05	1.13E+03	4.29E-05	0.00%	0.00%
Nitrate/Nitrite	5.39E-03	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.39E-03	5.07E+02	1.06E-05	1.13E+03	4.77E-06	0.00%	0.00%
Oxychlordane	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	3.30E-08	0.00E+00	0.00E+00	0.00E+00	3.30E-08	4.58E+00	7.19E-09	9.16E+00	3.60E-09	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.13E-07	0.00E+00	0.00E+00	0.00E+00	1.13E-07	2.40E-01	4.71E-07	2.40E+00	4.71E-08	0.00%	0.00%
Pentachlorophenol	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	7.72E-05	0.00E+00	0.00E+00	0.00E+00	7.72E-05	2.40E-01	3.22E-04	2.40E+00	3.22E-05	0.00%	0.00%
Perchlorate	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	NA	1.80E-02	0.00E+00	0.00E+00	0.00E+00	1.80E-02	8.50E+00	2.12E-03	2.55E+01	7.07E-04	0.01%	0.02%
Selenium	0.00E+00	5.18E-03	0.00E+00	0	0.00E+00	0.00E+00	1.22E-02	1.26E-03	1.22E-02	0.00E+00	0.00E+00	3.08E-02	2.00E-01	1.54E-01	3.30E-01	9.34E-02	0.50%	2.84%
Silver	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	2.00E-02	0.00E+00	0.00E+00	0.00E+00	2.00E-02	2.63E+02	7.61E-05	7.89E+02	2.54E-05	0.00%	0.00%
Sulfate	4.99E-01	9.57E-02	0.00E+00	0	0.00E+00	0.00E+00	9.62E-02	2.00E-01	9.62E-02	0.00E+00	0.00E+00	9.87E-01	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	4.23E-03	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.23E-03	7.40E-03	5.72E-01	7.40E-02	5.72E-02	1.84%	1.74%
trans-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.73E-08	0.00E+00	0.00E+00	0.00E+00	1.73E-08	4.58E+00	3.77E-09	9.16E+00	1.89E-09	0.00%	0.00%
Vanadium	2.56E-03	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	3.82E-04	0.00E+00	0.00E+00	0.00E+00	2.94E-03	2.10E-01	1.40E-02	2.10E+00	1.40E-03	0.05%	0.04%
Zinc	0.00E+00	2.22E-01	0.00E+00	0	0.00E+00	0.00E+00	1.12E+00	3.11E-01	1.12E+00	0.00E+00	0.00E+00	2.77E+00	1.60E+02	1.73E-02	3.20E+02	8.66E-03	0.06%	0.26%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	2.1E-08	1.1E-08	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	4.3E-06	8.7E-07	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	5.0E-05	5.0E-06	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	2.1E-06	2.1E-07	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0.1	unitless
Aquatic plant diet fraction =	0.45	unitless
Plant root diet fraction =	0.45	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0.008093	kg/d
Food ingestion rate =	0.0861	kg/d
Body weight =	1.174	kg
Home range =	0.33112	acres
Water intake rate =	0.114	L/d
Site Area =	262	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-91
Tier 1 COPCs
EEQs and Hazard Indices for the River Otter at LHAAP
Low Impact Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
									----------Unitless					----------	
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00
2,3,7,8-TCDD TEQ	1.22E-08	mg/L	8.87E-06	mg/kg	3.95E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.40E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	4.30E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.23E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.87E-04	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.76E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Aluminum	6.11E+00	mg/L	9.69E+03	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	6.37E-01	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.07E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.42E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.11E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	7.47E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.50E-04	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00
Barium	0.00E+00	mg/L	1.32E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	6.80E-02	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00
Cadmium	2.49E-03	mg/L	5.48E-01	mg/kg	3.84E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.58E+01	8.11E-01	9.52E-01	9.52E-01	9.22E-01	9.22E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.88E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.22E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Copper	1.18E-02	mg/L	7.20E+00	mg/kg	7.43E+00	mg/kg	1.00E+00	5.92E+03	5.25E+00	1.32E+00	5.86E-01	5.75E-01	5.75E-01	1.49E-01	1.49E-01
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.86E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.75E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.20E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00
Iron	5.98E+00	mg/L	0.00E+00	mg/kg	1.00E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01		
Lead	5.18E-03	mg/L	0.00E+00	mg/kg	2.51E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	4.39E-01	NA	6.40E-02	6.40E-02	1.33E-02	1.33E-02
Manganese	4.54E-01	mg/L	0.00E+00	mg/kg	9.35E+02	mg/kg	1.00E+00	2.00E+03	2.10E+00	2.21E-01	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.95E-02	mg/kg	1.00E+00		2.87E+00	7.16E+00	NA	1.35E+00	1.35E+00	1.03E-01	1.03E-01
Mercury (methyl)	0.00E+00	mg/L	9.58E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.08E+00	NA	NA		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.41E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00
Nickel	0.00E+00	mg/L	9.33E+00	mg/kg	7.10E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	6.21E-02	6.65E-02	6.65E-02	1.01E-01	1.01E-01
Nitrate	8.67E-01	mg/L	1.30E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Nitrate/Nitrite	7.06E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	8.83E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	4.23E-01	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.80E-01	mg/kg	1.00E+00			1.14E+00	NA	1.88E+01	1.88E+01	1.66E-01	1.66E-01
Selenium	0.00E+00	mg/L	8.67E-01	mg/kg	4.13E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.18E+00	4.99E-01	4.64E-01	4.64E-01	1.95E-01	1.95E-01
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Sulfate	6.09E+00	mg/L	2.00E+01	mg/kg	2.30E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Thallium	0.00E+00	mg/L	7.12E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.04E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Vanadium	3.33E-02	mg/L	0.00E+00	mg/kg	1.53E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03
Zinc	0.00E+00	mg/L	3.82E+01	mg/kg	5.89E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.53E+00	9.78E-01	8.08E-01	8.08E-01	4.51E-01	4.51E-01

Chemical	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL		LOAEL		Percent Contribution to	Percent Contribution to
	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	EEQ N	mg/kg-d	EEQ L	EEQ N	EEQ L
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	3.55E-10	1.97E-09	0.00E+00	3.19E-05	1.66E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.05E-10	3.20E-05	1.00E-06	3.20E+01	1.00E-05	3.20E+00	56.95%	55.54%
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.38E-06	1.38E-06	8.00E-01	1.72E-06	4.00E+00	3.45E-07	0.00%	0.00%
4,4'-DDE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.65E-06	3.65E-06	8.00E-01	4.56E-06	4.00E+00	9.12E-07	0.00%	0.00%
4,4'-DDT	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.16E-06	3.16E-06	8.00E-01	3.95E-06	4.00E+00	7.91E-07	0.00%	0.00%
Aldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.84E-07	1.84E-07	2.00E-01	9.20E-07	1.00E+00	1.84E-07	0.00%	0.00%
alpha-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.70E-07	3.70E-07	4.58E+00	8.08E-08	9.16E+00	4.04E-08	0.00%	0.00%
Aluminum	1.78E-01	2.15E+00	0.00E+00	4.04E-01	3.72E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+01	1.93E+00	2.07E+01	1.93E+01	2.07E+00	36.81%	35.90%
Antimony	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.04E-05	9.04E-05	1.25E-01	7.23E-04	1.25E+00	7.23E-05	0.00%	0.00%
Aroclor 1242	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.02E-06	3.02E-06	6.85E-02	4.41E-05	6.85E-01	4.41E-06	0.00%	0.00%
Aroclor 1248	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.40E-06	1.40E-06	6.80E-02	2.05E-05	6.90E-01	2.02E-06	0.00%	0.00%
Aroclor 1254	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.73E-06	3.73E-06	6.80E-02	5.48E-05	6.90E-01	5.40E-06	0.00%	0.00%
Aroclor 1260	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.22E-05	1.22E-05	6.80E-02	1.80E-04	6.90E-01	1.77E-05	0.00%	0.00%
Aroclor 1268	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.36E-07	8.36E-07	6.80E-02	1.23E-05	6.90E-01	1.21E-06	0.00%	0.00%
Barium	0.00E+00	2.94E-02	0.00E+00	0.00E+00	5.08E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.38E-01	5.10E+00	1.05E-01	1.98E+01	2.72E-02	0.19%	0.47%
Benzoic Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.69E-05	6.69E-05	4.00E+00	1.67E-05	4.00E+01	1.67E-06	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	7.24E-05	1.22E-04	0.00E+00	6.23E-02	3.74E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.02E-04	6.65E-02	1.00E+00	6.65E-02	1.00E+01	6.65E-03	0.12%	0.12%
Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.84E-07	1.84E-07	4.58E+00	4.03E-08	9.16E+00	2.01E-08	0.00%	0.00%
Chromium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.48E-03	3.48E-03	3.28E+00	1.06E-03	1.31E+01	2.65E-04	0.00%	0.00%
cis-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.44E-07	2.44E-07	4.58E+00	5.32E-08	9.16E+00	2.66E-08	0.00%	0.00%
Copper	3.44E-04	1.60E-03	0.00E+00	1.07E+00	3.23E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.48E-04	1.11E+00	1.17E+01	9.47E-02	1.51E+01	7.32E-02	0.17%	1.27%
Dieldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E-07	1.83E-07	2.00E-02	9.13E-06	2.00E-01	9.13E-07	0.00%	0.00%
Endrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.86E-07	2.86E-07	9.20E-02	3.11E-06	9.20E-01	3.11E-07	0.00%	0.00%
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.17E-07	2.17E-07	8.00E-02	2.71E-06	2.90E-01	7.47E-07	0.00%	0.00%
HMX	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	1.74E-01	0.00E+00	0.00E+00	9.18E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.77E-02	9.20E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	1.35E-05	0.00E+00	0.00E+00	1.14E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E-03	NA	NA	NA	NA	NA	NA
Lead	1.51E-04	0.00E+00	0.00E+00	1.19E-01	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	2.85E-04	1.20E-01	8.00E+00	1.50E-02	8.00E+01	1.50E-03	0.03%	0.03%
Manganese	1.32E-02	0.00E+00	0.00E+00	1.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.64E-03	1.40E+01	8.80E+01	1.59E-01	2.84E+02	4.92E-02	0.28%	0.85%
Mercury (inorganic)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	5.23E-06	5.23E-06	1.00E+00	5.23E-06	3.00E+00	1.74E-06	0.00%	0.00%
Mercury (methyl)	0.00E+00	2.13E-05	0.00E+00	0.00E+00	2.34E-04	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	2.56E-04	1.50E-02	1.70E-02	2.50E-02	1.02E-02	0.03%	0.18%
Mirex	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.36E-07	3.36E-07	7.00E-02	4.80E-06	7.00E-01	4.80E-07	0.00%	0.00%
Nickel	0.00E+00	2.07E-03	0.00E+00	0.00E+00	1.85E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.13E-04	2.12E-02	4.00E+01	5.29E-04	8.00E+01	2.64E-04	0.00%	0.00%
Nitrate	2.52E-02	2.88E-05	0.00E+00	1.42E+01	2.32E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.43E+01	5.07E+02	2.81E-02	1.13E+03	1.26E-02	0.05%	0.22%
Nitrate/Nitrite	2.06E-03	0.00E+00	0.00E+00	1.16E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.16E+00	5.07E+02	2.29E-03	1.13E+03	1.03E-03	0.00%	0.02%
Oxychlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.73E-07	1.73E-07	4.58E+00	3.78E-08	9.16E+00	1.89E-08	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.69E-07	8.69E-07	2.40E-01	3.62E-06	2.40E+00	3.62E-07	0.00%	0.00%
Pentachlorophenol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.16E-04	4.16E-04	2.40E-01	1.73E-03	2.40E+00	1.73E-04	0.00%	0.00%
Perchlorate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	3.97E-05	3.97E-05	8.50E+00	4.67E-06	2.55E+01	1.56E-06	0.00%	0.00%
Selenium	0.00E+00	1.92E-04	0.00E+00	0.00E+00	3.33E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.87E-05	3.59E-03	2.00E-01	1.79E-02	3.30E-01	1.09E-02	0.03%	0.19%
Silver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.02E-03	2.02E-03	2.63E+02	7.70E-06	7.89E+02	2.57E-06	0.00%	0.00%
Sulfate	1.77E-01	4.43E-03	0.00E+00	9.99E+01	3.58E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.26E-02	1.00E+02	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	1.58E-04	0.00E+00	0.00E+00	2.73E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.89E-03	7.40E-03	3.91E-01	7.40E-02	3.91E-02	0.69%	0.68%
trans-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.99E-07	2.99E-07	4.58E+00	6.52E-08	9.16E+00	3.26E-08	0.00%	0.00%
Vanadium	9.70E-04	0.00E+00	0.00E+00	5.46E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.75E-05	5.47E-01	2.10E-01	2.61E+00	2.10E+00	2.61E-01	4.63%	4.52%
Zinc	0.00E+00	8.47E-03	0.00E+00	0.00E+00	2.45E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.27E-02	2.76E-01	1.60E+02	1.73E-03	3.20E+02	8.64E-04	0.00%	0.01%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	2.8E-07	1.4E-07	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	1.0E-05	2.0E-06	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	3.1E-04	3.1E-05	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	1.3E-05	1.4E-06	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text tables.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.9	unitless
Aq. Invert diet fraction =	0.05	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0.05	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0.00494	kg/d
Food ingestion rate =	0.38	kg/d
Body weight =	8	kg
Home range =	729	acres
Water intake rate =	0.648	L/d
Site Area =	262	acres
Area Use Factor (AUF) =	0.359396	unitless
Exposure Duration (ED) =	1	unitless

Table E-92
Tier 2 COPCs
EEQs and Hazard Indices for the River Otter at LHAAP
Low Impact Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
							---Unitless---								
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01
2,3,7,8-TCDD TEQ	1.07E-08	mg/L	5.59E-06	mg/kg	3.18E-06	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	8.00E-04	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	3.10E-03	mg/kg	1.00E+00		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.07E-03	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.15E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Aluminum	4.16E+00	mg/L	8.09E+03	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-01	mg/kg	1.00E+00			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.55E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.21E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	3.32E-03	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	4.07E-03	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	7.92E-04	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	5.10E-02	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01
Cadmium	2.09E-03	mg/L	4.57E-01	mg/kg	3.02E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	2.87E+01	8.80E-01	1.06E+00	1.06E+00	6.72E-01	6.72E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Copper	9.31E-03	mg/L	6.17E+00	mg/kg	6.53E+00	mg/kg	1.00E+00	1.11E+03	1.56E+00	1.45E+00	6.44E-01	6.22E-01	6.22E-01	8.97E-02	8.97E-02
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.72E-04	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.93E-04	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01
Iron	4.18E+00	mg/L	0.00E+00	mg/kg	9.10E+03	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E+01	1.39E+01	1.39E+01		
Lead	4.09E-03	mg/L	0.00E+00	mg/kg	2.21E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	4.50E-01	NA	6.78E-02	6.78E-02	1.16E-02	1.16E-02
Manganese	3.17E-01	mg/L	0.00E+00	mg/kg	8.30E+02	mg/kg	1.00E+00	2.50E+02	4.20E-01	2.26E-01	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-02	mg/kg	1.00E+00		1.14E+00	7.64E+00	NA	1.41E+00	1.41E+00	9.15E-02	9.15E-02
Mercury (methyl)	0.00E+00	mg/L	8.35E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	1.15E+00	NA	NA		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.88E-04	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01
Nickel	0.00E+00	mg/L	8.12E+00	mg/kg	6.36E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	6.43E-02	6.84E-02	6.84E-02	8.71E-02	8.71E-02
Nitrate	4.79E-01	mg/L	9.50E-02	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Nitrate/Nitrite	5.55E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E-04	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.62E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-01	mg/kg	1.00E+00			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	7.70E-02	mg/kg	1.00E+00			3.00E-01	NA	3.19E+01	3.19E+01	1.11E-01	1.11E-01
Selenium	0.00E+00	mg/L	7.51E-01	mg/kg	3.74E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.21E+00	4.92E-01	4.59E-01	4.59E-01	1.51E-01	1.51E-01
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.30E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Sulfate	5.14E+00	mg/L	1.39E+01	mg/kg	1.30E+02	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Thallium	0.00E+00	mg/L	6.14E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Vanadium	2.64E-02	mg/L	0.00E+00	mg/kg	1.45E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03
Zinc	0.00E+00	mg/L	3.22E+01	mg/kg	4.79E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	6.34E+00	1.05E+00	8.84E-01	8.84E-01	1.84E-01	1.84E-01

Chemical	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	2.29E-10	9.15E-10	0.00E+00	2.793E-06	1.64E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.48E-11	2.81E-06	1.00E-06	2.81E+00	1.00E-05	2.81E-01	17.19%	16.88%
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.42E-07	4.42E-07	8.00E-01	5.52E-07	4.00E+00	1.10E-07	0.00%	0.00%
4,4'-DDE	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.84E-06	1.84E-06	8.00E-01	2.30E-06	4.00E+00	4.60E-07	0.00%	0.00%
4,4'-DDT	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.97E-07	5.97E-07	8.00E-01	7.46E-07	4.00E+00	1.49E-07	0.00%	0.00%
Aldrin	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.72E-08	9.72E-08	2.00E-01	4.86E-07	1.00E+00	9.72E-08	0.00%	0.00%
alpha-Chlordane	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E-07	1.74E-07	4.58E+00	3.80E-08	9.16E+00	1.90E-08	0.00%	0.00%
Aluminum	8.93E-02	1.32E+00	0.00E+00	0.2025714	2.29E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.45E+01	1.93E+00	1.27E+01	1.93E+01	1.27E+00	77.78%	76.38%
Antimony	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.55E-05	3.55E-05	1.25E-01	2.84E-04	1.25E+00	2.84E-05	0.00%	0.00%
Aroclor 1242	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.41E-06	1.41E-06	6.85E-02	2.06E-05	6.85E-01	2.06E-06	0.00%	0.00%
Aroclor 1248	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.67E-07	6.67E-07	6.80E-02	9.81E-06	6.90E-01	9.67E-07	0.00%	0.00%
Aroclor 1254	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.04E-06	1.04E-06	6.80E-02	1.53E-05	6.90E-01	1.51E-06	0.00%	0.00%
Aroclor 1260	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.28E-06	4.28E-06	6.80E-02	6.30E-05	6.90E-01	6.21E-06	0.00%	0.00%
Aroclor 1268	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.37E-07	4.37E-07	6.80E-02	6.43E-06	6.90E-01	6.34E-07	0.00%	0.00%
Barium	0.00E+00	1.93E-02	0.00E+00	0	3.35E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-01	5.10E+00	6.94E-02	1.98E+01	1.79E-02	0.42%	1.07%
Benzoic Acid	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.81E-05	2.81E-05	4.00E+00	7.04E-06	4.00E+01	7.04E-07	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	4.48E-05	7.49E-05	0.00E+00	0.0271349	1.73E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E-04	2.76E-02	1.00E+00	2.76E-02	1.00E+01	2.76E-03	0.17%	0.17%
Chlordane	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.55E-08	9.55E-08	4.58E+00	2.09E-08	9.16E+00	1.04E-08	0.00%	0.00%
Chromium	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.87E-04	5.87E-04	3.28E+00	1.79E-04	1.31E+01	4.47E-05	0.00%	0.00%
cis-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E-07	1.17E-07	4.58E+00	2.56E-08	9.16E+00	1.28E-08	0.00%	0.00%
Copper	2.00E-04	1.01E-03	0.00E+00	0.1172962	6.06E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.69E-04	1.25E-01	1.17E+01	1.07E-02	1.51E+01	8.25E-03	0.07%	0.50%
Dieldrin	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.49E-08	9.49E-08	2.00E-02	4.74E-06	2.00E-01	4.74E-07	0.00%	0.00%
Endrin	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.82E-07	1.82E-07	9.20E-02	1.98E-06	9.20E-01	1.98E-07	0.00%	0.00%
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E-07	1.07E-07	8.00E-02	1.33E-06	2.90E-01	3.67E-07	0.00%	0.00%
HMX	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	8.97E-02	0.00E+00	0.00E+00	11.834088	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.01E-02	1.19E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	9.99E-06	0.00E+00	0	1.79E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.89E-04	NA	NA	NA	NA	NA	NA
Lead	8.79E-05	0.00E+00	0.00E+00	0.0207722	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	1.62E-04	2.10E-02	8.00E+00	2.63E-03	8.00E+01	2.63E-04	0.02%	0.02%
Manganese	6.80E-03	0.00E+00	0.00E+00	0.8974769	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.96E-03	9.08E-01	8.80E+01	1.03E-02	2.84E+02	3.20E-03	0.06%	0.19%
Mercury (inorganic)	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	3.11E-06	3.11E-06	1.00E+00	3.11E-06	3.00E+00	1.04E-06	0.00%	0.00%
Mercury (methyl)	0.00E+00	1.37E-05	0.00E+00	0	5.97E-05	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	7.34E-05	1.50E-02	4.89E-03	2.50E-02	2.94E-03	0.03%	0.18%
Mirex	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E-07	1.59E-07	7.00E-02	2.27E-06	7.00E-01	2.27E-07	0.00%	0.00%
Nickel	0.00E+00	1.33E-03	0.00E+00	0	2.49E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.49E-04	4.16E-03	4.00E+01	1.04E-04	8.00E+01	5.21E-05	0.00%	0.00%
Nitrate	1.03E-02	1.56E-05	0.00E+00	1.6333972	2.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.64E+00	5.07E+02	3.24E-03	1.13E+03	1.45E-03	0.02%	0.09%
Nitrate/Nitrite	1.19E-03	0.00E+00	0.00E+00	0.1892839	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E-01	5.07E+02	3.76E-04	1.13E+03	1.69E-04	0.00%	0.01%
Oxychlordane	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.42E-08	9.42E-08	4.58E+00	2.06E-08	9.16E+00	1.03E-08	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.10E-07	3.10E-07	2.40E-01	1.29E-06	2.40E+00	1.29E-07	0.00%	0.00%
Pentachlorophenol	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.37E-04	1.37E-04	2.40E-01	5.69E-04	2.40E+00	5.69E-05	0.00%	0.00%
Perchlorate	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	5.37E-06	5.37E-06	8.50E+00	6.32E-07	2.55E+01	2.11E-07	0.00%	0.00%
Selenium	0.00E+00	1.23E-04	0.00E+00	0	2.13E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.55E-05	2.29E-03	2.00E-01	1.14E-02	3.30E-01	6.93E-03	0.07%	0.42%
Silver	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.06E-04	9.06E-04	2.63E+02	3.44E-06	7.89E+02	1.15E-06	0.00%	0.00%
Sulfate	1.10E-01	2.27E-03	0.00E+00	17.513023	3.67E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.07E-03	1.76E+01	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	1.01E-04	0.00E+00	0	1.74E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.84E-03	7.40E-03	2.49E-01	7.40E-02	2.49E-02	1.52%	1.49%
trans-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.39E-07	1.39E-07	4.58E+00	3.04E-08	9.16E+00	1.52E-08	0.00%	0.00%
Vanadium	5.67E-04	0.00E+00	0.00E+00	0.0900002	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-05	9.06E-02	2.10E-01	4.32E-01	2.10E+00	4.32E-02	2.64%	2.59%
Zinc	0.00E+00	5.27E-03	0.00E+00	0	3.93E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.56E-03	5.01E-02	1.60E+02	3.13E-04	3.20E+02	1.57E-04	0.00%	0.01%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.4E-07	6.8E-08	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	3.6E-06	7.2E-07	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.2E-04	1.1E-05	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	7.2E-06	7.7E-07	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text tables.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.9	unitless
Aq. Invert diet fraction =	0.05	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0.05	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0.00494	kg/d
Food ingestion rate =	0.38	kg/d
Body weight =	8	kg
Home range =	988	acres
Water intake rate =	0.648	L/d
Site Area =	262	acres
Area Use Factor (AUF) =	0.265182	unitless
Exposure Duration (ED) =	1	unitless

Table E-93
Tier 1 COPCs
EEQs and Hazard Indices for the Townsend's Big-Eared Bat at LHAAP
Low Impact Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL		LOAEL		Percent Contribution to	Percent Contribution to
									---Unitless---							mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	EEQ N	mg/kg-d	EEQ L	EEQ N	EEQ L
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	1.22E-08	mg/L	8.87E-06	mg/kg	3.95E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	1.93E-09	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.34E-09	0.00E+00	0.00E+00	0.00E+00	3.27E-09	1.00E-06	3.27E-03	1.00E-05	3.27E-04	0.32%	0.15%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.40E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	8.39E-06	0.00E+00	0.00E+00	0.00E+00	8.39E-06	8.00E-01	1.05E-05	4.00E+00	2.10E-06	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	4.30E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	2.00E-04	0.00E+00	0.00E+00	0.00E+00	2.00E-04	8.00E-01	2.49E-04	4.00E+00	4.99E-05	0.02%	0.02%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.23E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.33E-05	0.00E+00	0.00E+00	0.00E+00	1.33E-05	8.00E-01	1.67E-05	4.00E+00	3.34E-06	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.87E-04	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	9.49E-08	0.00E+00	0.00E+00	0.00E+00	9.49E-08	2.00E-01	4.75E-07	1.00E+00	9.49E-08	0.00%	0.00%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.76E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.14E-06	0.00E+00	0.00E+00	0.00E+00	1.14E-06	4.58E+00	2.48E-07	9.16E+00	1.24E-07	0.00%	0.00%
Aluminum	6.11E+00	mg/L	9.69E+03	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	9.65E-01	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.65E-01	1.93E+00	5.00E-01	1.93E+01	5.00E-02	48.97%	23.32%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	6.37E-01	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	3.34E-03	0.00E+00	0.00E+00	0.00E+00	3.34E-03	1.25E-01	2.67E-02	1.25E+00	2.67E-03	2.62%	1.25%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.07E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	3.75E-05	0.00E+00	0.00E+00	0.00E+00	3.75E-05	6.85E-02	5.47E-04	6.85E-01	5.47E-05	0.05%	0.03%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.42E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.07E-06	0.00E+00	0.00E+00	0.00E+00	1.07E-06	6.80E-02	1.58E-05	6.80E-01	1.58E-06	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.11E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	2.72E-06	0.00E+00	0.00E+00	0.00E+00	2.72E-06	6.80E-02	4.00E-05	6.80E-01	4.00E-06	0.00%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	7.47E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	2.54E-06	0.00E+00	0.00E+00	0.00E+00	2.54E-06	6.80E-02	3.74E-05	6.80E-01	3.74E-06	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.50E-04	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	3.35E-05	0.00E+00	0.00E+00	0.00E+00	3.35E-05	6.80E-02	4.92E-04	6.80E-01	4.92E-05	0.05%	0.02%
Barium	0.00E+00	mg/L	1.32E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E+00	0.00E+00	1.98E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	6.80E-02	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.64E-02	0.00E+00	0.00E+00	0.00E+00	1.64E-02	4.00E+00	4.09E-03	4.00E+01	4.09E-04	0.40%	0.19%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	2.49E-03	mg/L	5.48E-01	mg/kg	3.84E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.58E+01	8.11E-01	9.52E-01	9.52E-01	9.22E-01	9.22E-01	3.93E-04	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	2.74E-02	0.00E+00	0.00E+00	0.00E+00	2.77E-02	1.00E+00	2.77E-02	1.00E+01	2.77E-03	2.72%	1.29%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.88E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	5.66E-07	0.00E+00	0.00E+00	0.00E+00	5.66E-07	4.58E+00	1.24E-07	9.16E+00	6.18E-08	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.22E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	4.40E-01	0.00E+00	0.00E+00	0.00E+00	4.40E-01	3.28E+00	1.34E-01	1.31E+01	3.35E-02	13.14%	15.62%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	7.47E-07	0.00E+00	0.00E+00	0.00E+00	7.47E-07	4.58E+00	1.63E-07	9.16E+00	8.16E-08	0.00%	0.00%
Copper	1.18E-02	mg/L	7.20E+00	mg/kg	7.43E+00	mg/kg	1.00E+00	5.92E+03	5.25E+00	1.32E+00	5.86E-01	5.75E-01	5.75E-01	1.49E-01	1.49E-01	1.86E-03	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	3.20E-01	0.00E+00	0.00E+00	0.00E+00	3.22E-01	1.17E+01	2.75E-02	1.51E+01	2.12E-02	2.69%	9.91%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.86E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	2.28E-05	0.00E+00	0.00E+00	0.00E+00	2.28E-05	2.00E-02	1.14E-03	2.00E-01	1.14E-04	0.11%	0.05%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.75E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	7.88E-07	0.00E+00	0.00E+00	0.00E+00	7.88E-07	9.20E-02	8.56E-06	9.20E-01	8.56E-07	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.20E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	3.11E-07	0.00E+00	0.00E+00	0.00E+00	3.11E-07	8.00E-02	3.89E-06	2.90E-01	1.07E-06	0.00%	0.00%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	5.98E+00	mg/L	0.00E+00	mg/kg	1.00E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	9.44E-01	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	3.00E+00	0.00E+00	0.00E+00	0.00E+00	3.95E+00	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	5.18E-03	mg/L	0.00E+00	mg/kg	2.51E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	4.39E-01	NA	6.40E-02	6.40E-02	1.33E-02	1.33E-02	8.18E-04	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	NA	1.20E-01	0.00E+00	0.00E+00	0.00E+00	1.21E-01	8.00E+00	1.52E-02	8.00E+01	1.52E-03	1.48%	0.71%
Manganese	4.54E-01	mg/L	0.00E+00	mg/kg	9.35E+02	mg/kg	1.00E+00	2.00E+03	2.10E+00	2.21E-01	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	7.17E-02	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	7.00E+00	0.00E+00	0.00E+00	0.00E+00	7.07E+00	8.80E+01	8.04E-02	2.84E+02	2.49E-02	7.87%	11.62%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.95E-02	mg/kg	1.00E+00		2.87E+00	7.16E+00	NA	1.35E+00	1.35E+00	1.03E-01	1.03E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	NA	6.00E-03	0.00E+00	0.00E+00	0.00E+00	6.00E-03	1.32E+01	4.55E-04	3.96E+01	1.52E-04	0.04%	0.07%
Mercury (methyl)	0.00E+00	mg/L	9.58E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.08E+00	NA	NA			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	3.20E-02	0.00E+00	1.60E-01	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.41E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	8.78E-07	0.00E+00	0.00E+00	0.00E+00	8.78E-07	7.00E-02	1.25E-05	7.00E-01	1.25E-06	0.00%	0.00%
Nickel	0.00E+00	mg/L	9.33E+00	mg/kg	7.10E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	6.21E-02	6.65E-02	6.65E-02	1.01E-01	1.01E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	3.54E-02	0.00E+00	0.00E+00	0.00E+00	3.54E-02	4.00E+01	8.84E-04	8.00E+01	4.42E-04	0.09%	0.21%
Nitrate	8.67E-01	mg/L	1.30E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	1.37E-01	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.37E-01	5.07E+02	2.70E-04	1.13E+03	1.21E-04	0.03%	0.06%
Nitrate/Nitrite	7.06E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03								1.11E-02	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E-02	5.07E+02	2.20E-05	1.13E+03	9.87E-06	0.00%	0.00%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	3.47E-07	0.00E+00	0.00E+00	0.00E+00	3.47E-07	4.58E+00	7.57E-08	9.16E+00	3.78E-08	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	8.83E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	2.21E-06	0.00E+00	0.00E+00	0.00E+00	2.21E-06	2.40E-01	9.22E-06	2.40E+00	9.22E-07	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	4.23E-01	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	2.23E-03	0.00E+00	0.00E+00	0.00E+00	2.23E-03	2.40E-01	9.29E-03	2.40E+00	9.29E-04	0.91%	0.43%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.80E-01	mg/kg	1.00E+00			1.14E+00	NA	1.88E+01	1.88E+01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	NA	3.94E-01	0.00E+00	0.00E+00	0.00E+00	3.94E-01	8.50E+00	4.63E-02	2.55E+01	1.54E-02	4.54%	7.20%
Selenium	0.00E+00	mg/L	8.67E-01	mg/kg	4.13E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.18E+00	4.99E-01	4.64E-01	4.64E-01	1.95E-01	1.95E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.43E-02	0.00E+00	0.00E+00	0.00E+00	1.43E-02	2.00E-01	7.16E-02	3.30E-01	4.34E-02	7.01%	20.24%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	3.74E-01	0.00E+00	0.00E+00	0.00E+00	3.74E-01	2.63E+02	1.42E-03	7.89E+02	4.74E-04	0.14%	0.22%
Sulfate	6.09E+00	mg/L	2.00E+01	mg/kg	2.30E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	9.62E-01	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	6.02E+00	0.00E+00	0.00E+00	0.00E+00	6.99E+00	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	7.12E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00							0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.40E-03	0.00E+00	7.40E-02	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.04E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	9.16E-07	0.00E+00	0.00E+00	0.00E+00	9.16E-07	4.58E+00	2.00E-07	9.16E+00	1.00E-07	0.00%	0.00%
Vanadium	3.33E-02	mg/L	0.00E+00	mg/kg	1.53E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	5.26E-03	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	4.59E-03	0.00E+00	0.00E+00	0.00E+00	9.85E-03	2.10E-01	4.69E-02	2.10E+00	4.69E-03	4.59%	2.19%
Zinc	0.00E+00	mg/L	3.82E+01	mg/kg	5.89E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.53E+00	9.78E-01	8.08E-01	8.08E-01	4.51E-01	4.51E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	3.56E+00	0.00E+00	0.00E+00	0.00E+00	3.56E+00	1.60E+02	2.23E-02	3.20E+02	1.11E-02	2.18%	5.19%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	8.1E-07	4.1E-07	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	2.8E-04	5.5E-05	0.03%	0.03%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.1E-03	1.1E-04	0.11%	0.05%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	1.1E-03	1.1E-04	0.11%	0.05%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\,x\,Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	1	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.000711	kg/d
Body weight =	0.0095	kg
Home range =	1310	acres
Water intake rate =	0.0015	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-94
Tier 2 COPCs
EEQs and Hazard Indices for the Townsend's Big-Eared Bat at LHAAP
Low Impact Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
									----------Unitless----------							mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	1.07E-08	mg/L	5.59E-06	mg/kg	3.18E-06	mg/kg	#######	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	1.38E-09	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	7.56E-10	0.00E+00	0.00E+00	0.00E+00	2.13E-09	1.00E-06	2.13E-03	1.00E-05	2.13E-04	0.41%	0.19%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	8.00E-04	mg/kg	#######		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.37E-06	0.00E+00	0.00E+00	0.00E+00	1.37E-06	8.00E-01	1.72E-06	4.00E+00	3.43E-07	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	3.10E-03	mg/kg	#######		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	2.58E-05	0.00E+00	0.00E+00	0.00E+00	2.58E-05	8.00E-01	3.23E-05	4.00E+00	6.46E-06	0.01%	0.01%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.07E-03	mg/kg	#######		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.83E-06	0.00E+00	0.00E+00	0.00E+00	1.83E-06	8.00E-01	2.29E-06	4.00E+00	4.58E-07	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	#######			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	5.24E-08	0.00E+00	0.00E+00	0.00E+00	5.24E-08	2.00E-01	2.62E-07	1.00E+00	5.24E-08	0.00%	0.00%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.15E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.80E-07	0.00E+00	0.00E+00	0.00E+00	1.80E-07	4.58E+00	3.93E-08	9.16E+00	1.97E-08	0.00%	0.00%
Aluminum	4.16E+00	mg/L	8.09E+03	mg/kg	0.00E+00	mg/kg	#######	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	5.37E-01	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.37E-01	1.93E+00	2.78E-01	1.93E+01	2.78E-02	53.27%	24.13%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-01	mg/kg	#######			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.15E-03	0.00E+00	0.00E+00	0.00E+00	1.15E-03	1.25E-01	9.24E-03	1.25E+00	9.24E-04	1.77%	0.80%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.55E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.31E-06	0.00E+00	0.00E+00	0.00E+00	1.31E-06	6.85E-02	1.91E-05	6.85E-01	1.91E-06	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.21E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	6.21E-07	0.00E+00	0.00E+00	0.00E+00	6.21E-07	6.80E-02	9.13E-06	6.80E-01	9.13E-07	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	3.32E-03	mg/kg	#######		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	7.27E-07	0.00E+00	0.00E+00	0.00E+00	7.27E-07	6.80E-02	1.07E-05	6.80E-01	1.07E-06	0.00%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	4.07E-03	mg/kg	#######			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.60E-07	0.00E+00	0.00E+00	0.00E+00	1.60E-07	6.80E-02	2.36E-06	6.80E-01	2.36E-07	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	7.92E-04	mg/kg	#######			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	2.55E-05	0.00E+00	0.00E+00	0.00E+00	2.55E-05	6.80E-02	3.76E-04	6.80E-01	3.76E-05	0.07%	0.03%
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	0.00E+00	mg/kg	#######	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E+00	0.00E+00	1.98E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	5.10E-02	mg/kg	#######			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.00E-02	0.00E+00	0.00E+00	0.00E+00	1.00E-02	4.00E+00	2.51E-03	4.00E+01	2.51E-04	0.48%	0.22%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	2.09E-03	mg/L	4.57E-01	mg/kg	3.02E-01	mg/kg	#######	1.15E+03	6.00E-01	2.87E+01	8.80E-01	1.06E+00	1.06E+00	6.72E-01	6.72E-01	2.69E-04	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.96E-02	0.00E+00	0.00E+00	0.00E+00	1.99E-02	1.00E+00	1.99E-02	1.00E+01	1.99E-03	3.81%	1.73%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	9.89E-08	0.00E+00	0.00E+00	0.00E+00	9.89E-08	4.58E+00	2.16E-08	9.16E+00	1.08E-08	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E+01	mg/kg	#######	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	2.77E-02	0.00E+00	0.00E+00	0.00E+00	2.77E-02	3.28E+00	8.44E-03	1.31E+01	2.11E-03	1.62%	1.83%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.21E-07	0.00E+00	0.00E+00	0.00E+00	1.21E-07	4.58E+00	2.65E-08	9.16E+00	1.32E-08	0.00%	0.00%
Copper	9.31E-03	mg/L	6.17E+00	mg/kg	6.53E+00	mg/kg	#######	1.11E+03	1.56E+00	1.45E+00	6.44E-01	6.22E-01	6.22E-01	8.97E-02	8.97E-02	1.20E-03	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	2.49E-01	0.00E+00	0.00E+00	0.00E+00	2.50E-01	1.17E+01	2.14E-02	1.51E+01	1.65E-02	4.09%	14.32%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.72E-04	mg/kg	#######		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	2.53E-07	0.00E+00	0.00E+00	0.00E+00	2.53E-07	2.00E-02	1.26E-05	2.00E-01	1.26E-06	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-04	mg/kg	#######			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	3.99E-07	0.00E+00	0.00E+00	0.00E+00	3.99E-07	9.20E-02	4.34E-06	9.20E-01	4.34E-07	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.93E-04	mg/kg	#######			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.88E-07	0.00E+00	0.00E+00	0.00E+00	1.88E-07	8.00E-02	2.35E-06	2.90E-01	6.48E-07	0.00%	0.00%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	4.18E+00	mg/L	0.00E+00	mg/kg	9.10E+03	mg/kg	#######	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	5.40E-01	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	2.23E+00	0.00E+00	0.00E+00	0.00E+00	2.77E+00	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	#######		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	4.09E-03	mg/L	0.00E+00	mg/kg	2.21E+01	mg/kg	#######	4.48E+02	7.10E-02	4.50E-01	NA	6.78E-02	6.78E-02	1.16E-02	1.16E-02	5.29E-04	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	NA	9.17E-02	0.00E+00	0.00E+00	0.00E+00	9.22E-02	8.00E+00	1.15E-02	8.00E+01	1.15E-03	2.21%	1.00%
Manganese	3.17E-01	mg/L	0.00E+00	mg/kg	8.30E+02	mg/kg	#######	2.50E+02	4.20E-01	2.26E-01	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	4.09E-02	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	4.02E+00	0.00E+00	0.00E+00	0.00E+00	4.06E+00	8.80E+01	4.61E-02	2.84E+02	1.43E-02	8.82%	12.39%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-02	mg/kg	#######		1.14E+00	7.64E+00	NA	1.41E+00	1.41E+00	9.15E-02	9.15E-02	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	NA	4.66E-03	0.00E+00	0.00E+00	0.00E+00	4.66E-03	1.32E+01	3.53E-04	3.96E+01	1.18E-04	0.07%	0.10%
Mercury (methyl)	0.00E+00	mg/L	8.35E-02	mg/kg	0.00E+00	mg/kg	#######		1.14E+00	NA	1.15E+00	NA	NA			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	3.20E-02	0.00E+00	1.60E-01	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.88E-04	mg/kg	#######			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	6.08E-08	0.00E+00	0.00E+00	0.00E+00	6.08E-08	7.00E-02	8.68E-07	7.00E-01	8.68E-08	0.00%	0.00%
Nickel	0.00E+00	mg/L	8.12E+00	mg/kg	6.36E+00	mg/kg	#######		4.86E-01	1.06E+00	6.43E-02	6.84E-02	6.84E-02	8.71E-02	8.71E-02	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	2.66E-02	0.00E+00	0.00E+00	0.00E+00	2.66E-02	4.00E+01	6.66E-04	8.00E+01	3.33E-04	0.13%	0.29%
Nitrate	4.79E-01	mg/L	9.50E-02	mg/kg	0.00E+00	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	6.19E-02	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.19E-02	5.07E+02	1.22E-04	1.13E+03	5.48E-05	0.02%	0.05%
Nitrate/Nitrite	5.55E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	3.01E+02								7.17E-03	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.17E-03	5.07E+02	1.41E-05	1.13E+03	6.35E-06	0.00%	0.01%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E-04	mg/kg	#######			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	2.75E-07	0.00E+00	0.00E+00	0.00E+00	2.75E-07	4.58E+00	6.01E-08	9.16E+00	3.01E-08	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.62E-04	mg/kg	#######			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	9.43E-07	0.00E+00	0.00E+00	0.00E+00	9.43E-07	2.40E-01	3.93E-06	2.40E+00	3.93E-07	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-01	mg/kg	#######			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	6.45E-04	0.00E+00	0.00E+00	0.00E+00	6.45E-04	2.40E-01	2.69E-03	2.40E+00	2.69E-04	0.51%	0.23%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	7.70E-02	mg/kg	#######			3.00E-01	NA	3.19E+01	3.19E+01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	NA	1.51E-01	0.00E+00	0.00E+00	0.00E+00	1.51E-01	8.50E+00	1.77E-02	2.55E+01	5.91E-03	3.39%	5.12%
Selenium	0.00E+00	mg/L	7.51E-01	mg/kg	3.74E-01	mg/kg	#######	2.05E+02	4.50E+00	1.21E+00	4.92E-01	4.59E-01	4.59E-01	1.51E-01	1.51E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.05E-02	0.00E+00	0.00E+00	0.00E+00	1.05E-02	2.00E-01	5.25E-02	3.30E-01	3.18E-02	10.06%	27.61%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.30E+01	mg/kg	#######		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.67E-01	0.00E+00	0.00E+00	0.00E+00	1.67E-01	2.63E+02	6.35E-04	7.89E+02	2.12E-04	0.12%	0.18%
Sulfate	5.14E+00	mg/L	1.39E+01	mg/kg	1.30E+02	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	6.64E-01	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.67E+00	0.00E+00	0.00E+00	0.00E+00	2.34E+00	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	6.14E-01	mg/kg	0.00E+00	mg/kg	#######	7.50E+01	4.50E+00							0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.40E-03	0.00E+00	7.40E-02	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	1.44E-07	0.00E+00	0.00E+00	0.00E+00	1.44E-07	4.58E+00	3.15E-08	9.16E+00	1.58E-08	0.00%	0.00%
Vanadium	2.64E-02	mg/L	0.00E+00	mg/kg	1.45E+01	mg/kg	#######	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	3.41E-03	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	3.19E-03	0.00E+00	0.00E+00	0.00E+00	6.60E-03	2.10E-01	3.14E-02	2.10E+00	3.14E-03	6.02%	2.73%
Zinc	0.00E+00	mg/L	3.22E+01	mg/kg	4.79E+01	mg/kg	#######	2.91E+03	1.94E+00	6.34E+00	1.05E+00	8.84E-01	8.84E-01	1.84E-01	1.84E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	2.60E+00	0.00E+00	0.00E+00	0.00E+00	2.60E+00	1.60E+02	1.62E-02	3.20E+02	8.12E-03	3.11%	7.04%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.8E-07	8.9E-08	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	3.6E-05	7.3E-06	0.01%	0.01%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	4.2E-04	4.2E-05	0.08%	0.04%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	1.7E-05	1.8E-06	0.00%	0.00%

Intake Equation:

$$E_j = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	1	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.000711	kg/d
Body weight =	0.0095	kg
Home range =	3930	acres
Water intake rate =	0.0015	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	0.8185751	unitless
Exposure Duration (ED) =	1	unitless

Table E-95
Tier 1 COPCs
EEQs and Hazard Indices for the Snapping Turtle at LHAAP
Low Impact Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
									---Unitless---						
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00
2,3,7,8-TCDD TEQ	1.22E-08	mg/L	8.87E-06	mg/kg	3.95E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.40E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	4.30E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.23E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.87E-04	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.76E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Aluminum	6.11E+00	mg/L	9.69E+03	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	6.37E-01	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.07E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.42E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.11E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	7.47E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.50E-04	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00
Barium	0.00E+00	mg/L	1.32E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	6.80E-02	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00
Cadmium	2.49E-03	mg/L	5.48E-01	mg/kg	3.84E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.58E+01	8.11E-01	9.52E-01	8.11E-01	9.22E-01	9.22E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.88E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.22E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Copper	1.18E-02	mg/L	7.20E+00	mg/kg	7.43E+00	mg/kg	1.00E+00	5.92E+03	5.25E+00	1.32E+00	5.86E-01	5.75E-01	5.86E-01	1.49E-01	1.49E-01
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.86E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.75E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.20E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00
Iron	5.98E+00	mg/L	0.00E+00	mg/kg	1.00E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01		
Lead	5.18E-03	mg/L	0.00E+00	mg/kg	2.51E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	4.39E-01	NA	6.40E-02	NA	1.33E-02	1.33E-02
Manganese	4.54E-01	mg/L	0.00E+00	mg/kg	9.35E+02	mg/kg	1.00E+00	2.00E+03	2.10E+00	2.21E-01	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.95E-02	mg/kg	1.00E+00		2.87E+00	7.16E+00	NA	1.35E+00	NA	1.03E-01	1.03E-01
Mercury (methyl)	0.00E+00	mg/L	9.58E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.08E+00	NA	1.08E+00		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.41E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00
Nickel	0.00E+00	mg/L	9.33E+00	mg/kg	7.10E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	6.21E-02	6.65E-02	6.21E-02	1.01E-01	1.01E-01
Nitrate	8.67E-01	mg/L	1.30E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Nitrate/Nitrite	7.06E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	8.83E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	4.23E-01	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.80E-01	mg/kg	1.00E+00			1.14E+00	NA	1.88E+01	1.88E+01	1.66E-01	1.66E-01
Selenium	0.00E+00	mg/L	8.67E-01	mg/kg	4.13E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.18E+00	4.99E-01	4.64E-01	4.99E-01	1.95E-01	1.95E-01
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Sulfate	6.09E+00	mg/L	2.00E+01	mg/kg	2.30E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Thallium	0.00E+00	mg/L	7.12E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.04E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Vanadium	3.33E-02	mg/L	0.00E+00	mg/kg	1.53E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03
Zinc	0.00E+00	mg/L	3.82E+01	mg/kg	5.89E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.53E+00	9.78E-01	8.08E-01	9.78E-01	4.51E-01	4.51E-01

Chemical	EED Surface Water (mg/kg-d)	EED Sediment (mg/kg-d)	EED Soil (mg/kg-d)	EED Fish (mg/kg-d)	EED Aq. Invert. (mg/kg-d)	EED Terr. Invert. (mg/kg-d)	EED Aq. Plants (mg/kg-d)	EED Terr. Plants (mg/kg-d)	EED Plant Roots (mg/kg-d)	EED Mammals (mg/kg-d)	EED Birds (mg/kg-d)	Total EED (mg/kg-d)	NOAEL (mg/kg-d)	EEQ N	LOAEL (mg/kg-d)	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDD TEQ	2.44E-10	1.41E-09	0.00E+00	3.626E-06	3.09E-08	0.00E+00	4.49E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.66E-06	NA	NA	NA	NA	NA	NA
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDE	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDT	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aldrin	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aluminum	1.22E-01	1.54E+00	0.00E+00	0.0459392	6.93E+00	0.00E+00	2.48E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.66E+00	NA	NA	NA	NA	NA	NA
Antimony	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1248	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1254	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1260	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1268	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Barium	0.00E+00	2.10E-02	0.00E+00	0	9.46E-02	0.00E+00	1.35E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.51E-01	NA	NA	NA	NA	NA	NA
Benzoic Acid	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	4.97E-05	8.70E-05	0.00E+00	0.0070874	6.96E-04	0.00E+00	4.94E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.41E-03	NA	NA	NA	NA	NA	NA
Chlordane	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Chromium	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
cis-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Copper	2.36E-04	1.14E-03	0.00E+00	0.1220987	6.01E-03	0.00E+00	4.70E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.34E-01	NA	NA	NA	NA	NA	NA
Dieldrin	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Endrin	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Iron	1.20E-01	0.00E+00	0.00E+00	10.448494	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.06E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	9.68E-06	0.00E+00	0	2.12E-04	0.00E+00	9.56E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.18E-03	NA	NA	NA	NA	NA	NA
Lead	1.04E-04	0.00E+00	0.00E+00	0.0135836	0.00E+00	0.00E+00	NA	0.00E+00	NA	0.00E+00	0.00E+00	1.37E-02	NA	NA	NA	NA	NA	NA
Manganese	9.09E-03	0.00E+00	0.00E+00	1.5887382	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.60E+00	NA	NA	NA	NA	NA	NA
Mercury (inorganic)	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Mercury (methyl)	0.00E+00	1.52E-05	0.00E+00	0	4.37E-05	NA	1.15E-04	NA	0.00E+00	0.00E+00	0.00E+00	1.74E-04	NA	NA	NA	NA	NA	NA
Mirex	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	1.48E-03	0.00E+00	0	3.44E-03	0.00E+00	6.45E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.57E-03	NA	NA	NA	NA	NA	NA
Nitrate	1.73E-02	2.06E-05	0.00E+00	1.619031	4.33E-05	0.00E+00	5.05E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.64E+00	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	1.41E-03	0.00E+00	0.00E+00	0.1318219	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E-01	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
p-Isopropyltoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Pentachloroanisole	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Pentachlorophenol	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Perchlorate	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Selenium	0.00E+00	1.38E-04	0.00E+00	0	6.20E-04	0.00E+00	4.81E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.24E-03	NA	NA	NA	NA	NA	NA
Silver	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Strontium	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Sulfate	1.22E-01	3.17E-03	0.00E+00	11.372196	6.66E-03	0.00E+00	7.77E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E+01	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	1.13E-04	0.00E+00	0	5.09E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.22E-04	NA	NA	NA	NA	NA	NA
trans-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Vanadium	6.66E-04	0.00E+00	0.00E+00	0.0621748	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.28E-02	NA	NA	NA	NA	NA	NA
Zinc	0.00E+00	6.06E-03	0.00E+00	0	4.57E-02	0.00E+00	4.15E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.33E-02	NA	NA	NA	NA	NA	NA

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	0.0E+00	0.0E+00	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	0.0E+00	0.0E+00	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text tables.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0.35	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.55	unitless
Aq. Invert diet fraction =	0.05	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0.000889	kg/d
Food ingestion rate =	0.0178	kg/d
Body weight =	5.6	kg
Home range =	0.593051	acres
Water intake rate =	0.112	L/d
Site Area =	262	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-96
Tier 2 COPCs
EEQs and Hazard Indices for the Snapping Turtle at LHAAP
Low Impact Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
									---Unitless---							mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDD TEQ	1.07E-08	mg/L	5.59E-06	mg/kg	3.18E-06	mg/kg	#######	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	2.13E-10	8.87E-10	0.00E+00	4.306E-07	4.15E-09	0.00E+00	2.41E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.36E-07	NA	NA	NA	NA	NA	NA
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	8.00E-04	mg/kg	#######		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	3.10E-03	mg/kg	#######		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.07E-03	mg/kg	#######		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	#######			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.15E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aluminum	4.16E+00	mg/L	8.09E+03	mg/kg	0.00E+00	mg/kg	#######	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	8.31E-02	1.28E+00	0.00E+00	0.0312387	5.79E+00	0.00E+00	1.35E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.20E+00	NA	NA	NA	NA	NA	NA
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-01	mg/kg	#######			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.55E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.21E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	3.32E-03	mg/kg	#######		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	4.07E-03	mg/kg	#######			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	7.92E-04	mg/kg	#######			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	0.00E+00	mg/kg	#######	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	1.87E-02	0.00E+00	0	8.44E-02	0.00E+00	2.05E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.24E-01	NA	NA	NA	NA	NA	NA
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	5.10E-02	mg/kg	#######			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	2.09E-03	mg/L	4.57E-01	mg/kg	3.02E-01	mg/kg	#######	1.15E+03	6.00E-01	2.87E+01	8.80E-01	1.06E+00	8.80E-01	6.72E-01	6.72E-01	4.17E-05	7.26E-05	0.00E+00	0.0041845	4.36E-05	0.00E+00	4.48E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.79E-03	NA	NA	NA	NA	NA	NA
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E+01	mg/kg	#######	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Copper	9.31E-03	mg/L	6.17E+00	mg/kg	6.53E+00	mg/kg	#######	1.11E+03	1.56E+00	1.45E+00	6.44E-01	6.22E-01	6.44E-01	8.97E-02	8.97E-02	1.86E-04	9.79E-04	0.00E+00	0.0180883	1.53E-03	0.00E+00	4.42E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.52E-02	NA	NA	NA	NA	NA	NA
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.72E-04	mg/kg	#######		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-04	mg/kg	#######			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.93E-04	mg/kg	#######			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Iron	4.18E+00	mg/L	0.00E+00	mg/kg	9.10E+03	mg/kg	#######	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	8.35E-02	0.00E+00	0.00E+00	1.8249417	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.91E+00	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	#######		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	9.68E-06	0.00E+00	0	4.53E-05	0.00E+00	9.43E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.98E-04	NA	NA	NA	NA	NA	NA
Lead	4.09E-03	mg/L	0.00E+00	mg/kg	2.21E+01	mg/kg	#######	4.48E+02	7.10E-02	4.50E-01	NA	6.78E-02	NA	1.16E-02	1.16E-02	8.18E-05	0.00E+00	0.00E+00	0.0032033	0.00E+00	0.00E+00	NA	0.00E+00	NA	0.00E+00	0.00E+00	3.29E-03	NA	NA	NA	NA	NA	NA
Manganese	3.17E-01	mg/L	0.00E+00	mg/kg	8.30E+02	mg/kg	#######	2.50E+02	4.20E-01	2.26E-01	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	6.33E-03	0.00E+00	0.00E+00	0.1384004	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.45E-01	NA	NA	NA	NA	NA	NA
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-02	mg/kg	#######		1.14E+00	7.64E+00	NA	1.41E+00	NA	9.15E-02	9.15E-02	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Mercury (methyl)	0.00E+00	mg/L	8.35E-02	mg/kg	0.00E+00	mg/kg	#######		1.14E+00	NA	1.15E+00	NA	1.15E+00			0.00E+00	1.33E-05	0.00E+00	0	1.51E-05	NA	1.07E-04	NA	0.00E+00	0.00E+00	0.00E+00	1.35E-04	NA	NA	NA	NA	NA	NA
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.88E-04	mg/kg	#######			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	mg/L	8.12E+00	mg/kg	6.36E+00	mg/kg	#######		4.86E-01	1.06E+00	6.43E-02	6.84E-02	6.43E-02	8.71E-02	8.71E-02	0.00E+00	1.29E-03	0.00E+00	0	6.27E-04	0.00E+00	5.81E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03	NA	NA	NA	NA	NA	NA
Nitrate	4.79E-01	mg/L	9.50E-02	mg/kg	0.00E+00	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	9.58E-03	1.51E-05	0.00E+00	0.2518872	6.34E-06	0.00E+00	2.22E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.62E-01	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	5.55E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	3.01E+02								1.11E-03	0.00E+00	0.00E+00	0.0291896	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.03E-02	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E-04	mg/kg	#######			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.62E-04	mg/kg	#######			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-01	mg/kg	#######			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	7.70E-02	mg/kg	#######			3.00E-01	NA	3.19E+01	3.19E+01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Selenium	0.00E+00	mg/L	7.51E-01	mg/kg	3.74E-01	mg/kg	#######	2.05E+02	4.50E+00	1.21E+00	4.92E-01	4.59E-01	4.92E-01	1.51E-01	1.51E-01	0.00E+00	1.19E-04	0.00E+00	0	5.37E-04	0.00E+00	4.11E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E-03	NA	NA	NA	NA	NA	NA
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.30E+01	mg/kg	#######		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Sulfate	5.14E+00	mg/L	1.39E+01	mg/kg	1.30E+02	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	1.03E-01	2.20E-03	0.00E+00	2.7006937	9.27E-04	0.00E+00	3.24E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.81E+00	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	6.14E-01	mg/kg	0.00E+00	mg/kg	#######	7.50E+01	4.50E+00							0.00E+00	9.74E-05	0.00E+00	0	4.39E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.36E-04	NA	NA	NA	NA	NA	NA
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Vanadium	2.64E-02	mg/L	0.00E+00	mg/kg	1.45E+01	mg/kg	#######	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	5.28E-04	0.00E+00	0.00E+00	0.013879	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.44E-02	NA	NA	NA	NA	NA	NA
Zinc	0.00E+00	mg/L	3.22E+01	mg/kg	4.79E+01	mg/kg	#######	2.91E+03	1.94E+00	6.34E+00	1.05E+00	8.84E-01	1.05E+00	1.84E-01	1.84E-01	0.00E+00	5.11E-03	0.00E+00	0	9.91E-03	0.00E+00	3.77E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.28E-02	NA	NA	NA	NA	NA	NA

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	0.0E+00	0.0E+00	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	0.0E+00	0.0E+00	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0.35	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.55	unitless
Aq. Invert diet fraction =	0.05	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0.000889	kg/d
Food ingestion rate =	0.0178	kg/d
Body weight =	5.6	kg
Home range =	11.21854	acres
Water intake rate =	0.112	L/d
Site Area =	262	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-97
Tier 1 COPCs
EEQs and Hazard Indices for the Bank Swallow at LHAAP
Low Impact Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							----------	----------	----------	Unitless	----------	----------	----------	----------		mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.22E-01	0.00E+00	1.27E+00	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	1.22E-08	mg/L	8.87E-06	mg/kg	3.95E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	2.92E-09	2.09E-08	0.00E+00	0	8.26E-06	4.15E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.70E-06	1.40E-05	6.21E-01	1.40E-04	6.21E-02	2.72%	0.89%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.40E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.03E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.03E-04	2.80E-03	3.67E-02	2.80E-02	3.67E-03	0.16%	0.05%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	4.30E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	3.17E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.17E-04	5.80E-02	5.47E-03	5.80E-01	5.47E-04	0.02%	0.01%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.23E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.70E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.70E-04	2.80E-03	6.06E-02	2.80E-02	6.06E-03	0.26%	0.09%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.87E-04	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.42E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-05	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.76E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	2.80E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.80E-05	2.14E+00	1.31E-05	1.07E+01	2.62E-06	0.00%	0.00%
Aluminum	6.11E+00	mg/L	9.69E+03	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	1.46E+00	2.28E+01	0.00E+00	0	1.86E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.88E+03	1.10E+02	1.71E+01	3.29E+02	5.71E+00	74.97%	82.20%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	6.37E-01	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	3.43E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.43E-03	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.07E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	2.29E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.29E-04	4.10E-01	5.59E-04	1.23E+00	1.86E-04	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.42E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.06E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.06E-04	1.80E-01	5.89E-04	1.80E+00	5.89E-05	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.11E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	3.15E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.15E-04	1.80E-01	1.75E-03	1.80E+00	1.75E-04	0.01%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	7.47E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	6.02E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.02E-04	1.80E-01	3.34E-03	1.80E+00	3.34E-04	0.01%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.50E-04	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	5.63E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.63E-05	1.80E-01	3.13E-04	1.80E+00	3.13E-05	0.00%	0.00%
Barium	0.00E+00	mg/L	1.32E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	3.11E-01	0.00E+00	0	2.53E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.56E+01	2.08E+01	1.23E+00	4.17E+01	6.15E-01	5.39%	8.85%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	6.80E-02	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	4.26E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.26E-03	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E+00	0.00E+00	3.33E+00	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	2.49E-03	mg/L	5.48E-01	mg/kg	3.84E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.58E+01	8.11E-01	9.52E-01	9.52E-01	9.22E-01	9.22E-01	5.96E-04	1.29E-03	0.00E+00	0	1.86E-01	4.68E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.35E-01	1.45E+00	1.62E-01	2.00E+01	1.17E-02	0.71%	0.17%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.88E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.40E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.40E-05	2.14E+00	6.53E-06	1.07E+01	1.31E-06	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.22E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.83E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E-01	1.00E+00	1.83E-01	5.00E+00	3.66E-02	0.80%	0.53%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.84E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.84E-05	2.14E+00	8.62E-06	1.07E+01	1.72E-06	0.00%	0.00%
Copper	1.18E-02	mg/L	7.20E+00	mg/kg	7.43E+00	mg/kg	1.00E+00	5.92E+03	5.25E+00	1.32E+00	5.86E-01	5.75E-01	5.75E-01	1.49E-01	1.49E-01	2.83E-03	1.69E-02	0.00E+00	0	1.61E+00	4.63E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.67E+00	4.70E+01	3.56E-02	6.17E+01	2.71E-02	0.16%	0.39%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.86E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.34E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.34E-05	7.70E-02	1.74E-04	2.31E-01	5.80E-05	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.75E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.99E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.99E-05	3.00E-01	6.62E-05	9.00E-01	2.21E-05	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.20E-01	0.00E+00	2.76E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.20E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.62E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.62E-05	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Iron	5.98E+00	mg/L	0.00E+00	mg/kg	1.00E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	1.43E+00	0.00E+00	0.00E+00	0	0.00E+00	3.70E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.13E+00	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	1.44E-04	0.00E+00	0	5.68E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.69E-02	NA	NA	NA	NA	NA	NA
Lead	5.18E-03	mg/L	0.00E+00	mg/kg	2.51E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	4.39E-01	NA	6.40E-02	6.40E-02	1.33E-02	1.33E-02	1.24E-03	0.00E+00	0.00E+00	0	0.00E+00	5.22E-02	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.34E-02	1.13E+00	4.73E-02	1.13E+01	4.73E-03	0.21%	0.07%
Manganese	4.54E-01	mg/L	0.00E+00	mg/kg	9.35E+02	mg/kg	1.00E+00	2.00E+03	2.10E+00	2.21E-01	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	1.09E-01	0.00E+00	0.00E+00	0	0.00E+00	9.77E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E+00	9.77E+02	1.11E-03	9.77E+03	1.11E-04	0.00%	0.00%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.95E-02	mg/kg	1.00E+00		2.87E+00	7.16E+00	NA	1.35E+00	1.35E+00	1.03E-01	1.03E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	2.01E-03	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.01E-03	4.50E-01	4.48E-03	9.00E-01	2.24E-03	0.02%	0.03%
Mercury (methyl)	0.00E+00	mg/L	9.58E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.08E+00	NA	NA			0.00E+00	2.25E-04	0.00E+00	0	1.17E-02	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	1.19E-02	6.40E-03	1.86E+00	6.40E-02	1.86E-01	8.14%	2.68%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.41E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	2.62E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.62E-05	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	mg/L	9.33E+00	mg/kg	7.10E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	6.21E-02	6.65E-02	6.65E-02	1.01E-01	1.01E-01	0.00E+00	2.20E-02	0.00E+00	0	9.20E-01	1.59E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E+00	7.74E+01	1.42E-02	1.07E+02	1.03E-02	0.06%	0.15%
Nitrate	8.67E-01	mg/L	1.30E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	2.08E-01	3.05E-04	0.00E+00	0	1.16E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.20E-01	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	7.06E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03								1.69E-02	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.69E-02	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.27E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E-05	2.14E+00	5.94E-06	1.07E+01	1.19E-06	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+02	0.00E+00	3.20E+02	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	8.83E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	6.34E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.34E-05	6.73E+00	9.41E-06	6.73E+01	9.41E-07	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	4.23E-01	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	2.97E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.97E-02	6.73E+00	4.41E-03	6.73E+01	4.41E-04	0.02%	0.01%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.80E-01	mg/kg	1.00E+00			1.14E+00	NA	1.88E+01	1.88E+01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.51E-03	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.51E-03	6.50E+01	2.32E-05	1.30E+02	1.16E-05	0.00%	0.00%
Selenium	0.00E+00	mg/L	8.67E-01	mg/kg	4.13E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.18E+00	4.99E-01	4.64E-01	4.64E-01	1.95E-01	1.95E-01	0.00E+00	2.04E-03	0.00E+00	0	1.66E-01	2.30E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.70E-01	1.80E+00	9.46E-02	5.40E+00	3.15E-02	0.41%	0.45%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E+00	0.00E+00	5.44E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.87E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.87E-02	NA	NA	NA	NA	NA	NA
Sulfate	6.09E+00	mg/L	2.00E+01	mg/kg	2.30E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	1.46E+00	4.70E-02	0.00E+00	0	1.78E+00	1.24E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.53E+00	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	7.12E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00							0.00E+00	1.68E-03	0.00E+00	0	1.36E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.38E-01	3.50E-01	3.94E-01	1.05E+00	1.31E-01	1.72%	1.89%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.04E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	2.26E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.26E-05	2.14E+00	1.06E-05	1.07E+01	2.11E-06	0.00%	0.00%
Vanadium	3.33E-02	mg/L	0.00E+00	mg/kg	1.53E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	7.98E-03	0.00E+00	0.00E+00	0	0.00E+00	6.38E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.44E-02	1.14E+01	1.26E-03	3.42E+01	4.20E-04	0.01%	0.01%
Zinc	0.00E+00	mg/L	3.82E+01	mg/kg	5.89E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.53E+00	9.78E-01	8.08E-01	8.08E-01	4.51E-01	4.51E-01	0.00E+00	8.99E-02	0.00E+00	0	1.22E+01	1.54E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.39E+01	1.45E+01	9.55E-01	1.31E+02	1.06E-01	4.18%	1.52%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	4.5E-05	8.9E-06	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	1.0E-01	1.0E-02	0.45%	0.15%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	6.6E-03	7.9E-04	0.03%	0.01%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	2.4E-04	8.0E-05	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi \, x \, Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0.9	unitless
Terr. Invert diet fraction =	0.1	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	3.44E-05	kg/d
Food ingestion rate =	0.00069	kg/d
Body weight =	0.0146	kg
Home range =	49.4	acres
Water intake rate =	0.0035	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-98
Tier 2 COPCs
EEQs and Hazard Indices for the Bank Swallow at LHAAP
Low Impact Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
							--Unitless--								
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01
2,3,7,8-TCDD TEQ	1.07E-08	mg/L	5.59E-06	mg/kg	3.18E-06	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	8.00E-04	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	3.10E-03	mg/kg	1.00E+00		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.07E-03	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.15E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Aluminum	4.16E+00	mg/L	8.09E+03	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-01	mg/kg	1.00E+00			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.55E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.21E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	3.32E-03	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	4.07E-03	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	7.92E-04	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	5.10E-02	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01
Cadmium	2.09E-03	mg/L	4.57E-01	mg/kg	3.02E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	2.87E+01	8.80E-01	1.06E+00	1.06E+00	6.72E-01	6.72E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Copper	9.31E-03	mg/L	6.17E+00	mg/kg	6.53E+00	mg/kg	1.00E+00	1.11E+03	1.56E+00	1.45E+00	6.44E-01	6.22E-01	6.22E-01	8.97E-02	8.97E-02
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.72E-04	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.93E-04	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01
Iron	4.18E+00	mg/L	0.00E+00	mg/kg	9.10E+03	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E+01	1.39E+01	1.39E+01		
Lead	4.09E-03	mg/L	0.00E+00	mg/kg	2.21E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	4.50E-01	NA	6.78E-02	6.78E-02	1.16E-02	1.16E-02
Manganese	3.17E-01	mg/L	0.00E+00	mg/kg	8.30E+02	mg/kg	1.00E+00	2.50E+02	4.20E-01	2.26E-01	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-02	mg/kg	1.00E+00		1.14E+00	7.64E+00	NA	1.41E+00	1.41E+00	9.15E-02	9.15E-02
Mercury (methyl)	0.00E+00	mg/L	8.35E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	1.15E+00	NA	NA		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.88E-04	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01
Nickel	0.00E+00	mg/L	8.12E+00	mg/kg	6.36E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	6.43E-02	6.84E-02	6.84E-02	8.71E-02	8.71E-02
Nitrate	4.79E-01	mg/L	9.50E-02	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Nitrate/Nitrite	5.55E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E-04	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.62E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-01	mg/kg	1.00E+00			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	7.70E-02	mg/kg	1.00E+00			3.00E-01	NA	3.19E+01	3.19E+01	1.11E-01	1.11E-01
Selenium	0.00E+00	mg/L	7.51E-01	mg/kg	3.74E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.21E+00	4.92E-01	4.59E-01	4.59E-01	1.51E-01	1.51E-01
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.30E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Sulfate	5.14E+00	mg/L	1.39E+01	mg/kg	1.30E+02	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Thallium	0.00E+00	mg/L	6.14E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Vanadium	2.64E-02	mg/L	0.00E+00	mg/kg	1.45E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03
Zinc	0.00E+00	mg/L	3.22E+01	mg/kg	4.79E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	6.34E+00	1.05E+00	8.84E-01	8.84E-01	1.84E-01	1.84E-01

Chemical	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.22E-01	0.00E+00	1.27E+00	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	2.56E-09	1.32E-08	0.00E+00	0	1.11E-06	1.66E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.29E-06	1.40E-05	9.23E-02	1.40E-04	9.23E-03	0.54%	0.17%
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	3.39E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.39E-05	2.80E-03	1.21E-02	2.80E-02	1.21E-03	0.07%	0.02%
4,4'-DDE	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.32E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.32E-04	5.80E-02	2.27E-03	5.80E-01	2.27E-04	0.01%	0.00%
4,4'-DDT	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	4.68E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.68E-05	2.80E-03	1.67E-02	2.80E-02	1.67E-03	0.10%	0.03%
Aldrin	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	7.71E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.71E-06	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.35E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.35E-05	2.14E+00	6.33E-06	1.07E+01	1.27E-06	0.00%	0.00%
Aluminum	9.96E-01	1.90E+01	0.00E+00	0	1.55E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.57E+03	1.10E+02	1.43E+01	3.29E+02	4.77E+00	84.06%	85.29%
Antimony	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	7.22E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.22E-04	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.10E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E-04	4.10E-01	2.68E-04	1.23E+00	8.94E-05	0.00%	0.00%
Aroclor 1248	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	5.21E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.21E-05	1.80E-01	2.89E-04	1.80E+00	2.89E-05	0.00%	0.00%
Aroclor 1254	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.47E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.47E-04	1.80E-01	8.14E-04	1.80E+00	8.14E-05	0.00%	0.00%
Aroclor 1260	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.89E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.89E-04	1.80E-01	1.05E-03	1.80E+00	1.05E-04	0.01%	0.00%
Aroclor 1268	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	3.02E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.02E-05	1.80E-01	1.68E-04	1.80E+00	1.68E-05	0.00%	0.00%
Barium	0.00E+00	2.78E-01	0.00E+00	0	2.26E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.29E+01	2.08E+01	1.10E+00	4.17E+01	5.49E-01	6.47%	9.82%
Benzoic Acid	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.84E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.84E-03	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E+00	0.00E+00	3.33E+00	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	5.00E-04	1.08E-03	0.00E+00	0	1.17E-02	4.11E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.43E-02	1.45E+00	3.75E-02	2.00E+01	2.72E-03	0.22%	0.05%
Chlordane	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	7.43E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.43E-06	2.14E+00	3.47E-06	1.07E+01	6.94E-07	0.00%	0.00%
Chromium	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.59E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E-02	1.00E+00	1.59E-02	5.00E+00	3.19E-03	0.09%	0.06%
cis-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	9.11E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.11E-06	2.14E+00	4.26E-06	1.07E+01	8.51E-07	0.00%	0.00%
Copper	2.23E-03	1.45E-02	0.00E+00	0	4.09E-01	4.49E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.71E-01	4.70E+01	1.00E-02	6.17E+01	7.63E-03	0.06%	0.14%
Dieldrin	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	7.15E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.15E-06	7.70E-02	9.29E-05	2.31E-01	3.10E-05	0.00%	0.00%
Endrin	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	9.90E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.90E-06	3.00E-01	3.30E-05	9.00E-01	1.10E-05	0.00%	0.00%
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.20E-01	0.00E+00	2.76E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	8.16E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.16E-06	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Iron	1.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.55E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.55E+00	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	1.44E-04	0.00E+00	0	1.21E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.23E-02	NA	NA	NA	NA	NA	NA
Lead	9.80E-04	0.00E+00	0.00E+00	0	0.00E+00	4.70E-02	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.80E-02	1.13E+00	4.24E-02	1.13E+01	4.24E-03	0.25%	0.08%
Manganese	7.59E-02	0.00E+00	0.00E+00	0	0.00E+00	8.86E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.62E-01	9.77E+02	9.85E-04	9.77E+03	9.85E-05	0.01%	0.00%
Mercury (inorganic)	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.95E-03	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.95E-03	4.50E-01	4.33E-03	9.00E-01	2.17E-03	0.03%	0.04%
Mercury (methyl)	0.00E+00	1.96E-04	0.00E+00	0	4.03E-03	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	4.23E-03	6.40E-03	6.61E-01	6.40E-02	6.61E-02	3.88%	1.18%
Mirex	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.28E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E-05	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	1.91E-02	0.00E+00	0	1.68E-01	3.18E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.19E-01	7.74E-01	2.83E-03	1.07E+02	2.05E-03	0.02%	0.04%
Nitrate	1.15E-01	2.24E-04	0.00E+00	0	1.70E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E-01	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	1.33E-02	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E-02	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	7.11E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.11E-06	2.14E+00	3.32E-06	1.07E+01	6.64E-07	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E-02	0.00E+00	3.20E+02	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	2.32E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.32E-05	6.73E+00	3.45E-06	6.73E+01	3.45E-07	0.00%	0.00%
Pentachlorophenol	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-02	6.73E+00	1.49E-03	6.73E+01	1.49E-04	0.01%	0.00%
Perchlorate	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.09E-04	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E-04	6.50E+01	1.68E-06	1.30E+02	8.40E-07	0.00%	0.00%
Selenium	0.00E+00	1.77E-03	0.00E+00	0	1.44E-01	2.14E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.48E-01	1.80E+00	8.20E-02	5.40E+00	2.73E-02	0.48%	0.49%
Silver	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E+00	0.00E+00	5.44E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	5.34E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.34E-03	NA	NA	NA	NA	NA	NA
Sulfate	1.23E+00	3.27E-02	0.00E+00	0	2.48E-01	1.84E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.70E+00	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	1.44E-03	0.00E+00	0	1.17E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.19E-01	3.50E-01	3.40E-01	1.05E+00	1.13E-01	2.00%	2.03%
trans-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.09E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E-05	2.14E+00	5.07E-06	1.07E+01	1.01E-06	0.00%	0.00%
Vanadium	6.33E-03	0.00E+00	0.00E+00	0	0.00E+00	2.87E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.20E-03	1.14E+01	8.07E-04	3.42E+01	2.69E-04	0.00%	0.00%
Zinc	0.00E+00	7.58E-02	0.00E+00	0	2.65E+00	1.44E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.16E+00	1.45E+01	2.87E-01	1.31E+02	3.18E-02	1.69%	0.57%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	2.2E-05	4.5E-06	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	3.1E-02	3.1E-03	0.18%	0.06%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	2.6E-03	3.2E-04	0.02%	0.01%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	1.3E-04	4.2E-05	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi \, x \, Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0.9	unitless
Terr. Invert diet fraction =	0.1	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	3.44E-05	kg/d
Food ingestion rate =	0.00069	kg/d
Body weight =	0.0146	kg
Home range =	247	acres
Water intake rate =	0.0035	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-99
Tier 1 COPCs
EEQs and Hazard Indices for the American Woodcock at LHAAP
Low Impact Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
							Unitless	Unitless	Unitless	Unitless	Unitless	Unitless	Unitless	Unitless	Unitless
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00
2,3,7,8-TCDD TEQ	1.22E-08	mg/L	8.87E-06	mg/kg	3.95E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.40E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	4.30E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.23E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.87E-04	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.76E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Aluminum	6.11E+00	mg/L	9.69E+03	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	6.37E-01	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.07E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.42E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.11E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	7.47E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.50E-04	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00
Barium	0.00E+00	mg/L	1.32E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	6.80E-02	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00
Cadmium	2.49E-03	mg/L	5.48E-01	mg/kg	3.84E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.58E+01	8.11E-01	9.52E-01	9.52E-01	9.22E-01	9.22E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.88E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.22E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Copper	1.18E-02	mg/L	7.20E+00	mg/kg	7.43E+00	mg/kg	1.00E+00	5.92E+03	5.25E+00	1.32E+00	5.86E-01	5.75E-01	5.75E-01	1.49E-01	1.49E-01
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.86E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.75E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.20E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00
Iron	5.98E+00	mg/L	0.00E+00	mg/kg	1.00E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01		
Lead	5.18E-03	mg/L	0.00E+00	mg/kg	2.51E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	4.39E-01	NA	6.40E-02	6.40E-02	1.33E-02	1.33E-02
Manganese	4.54E-01	mg/L	0.00E+00	mg/kg	9.35E+02	mg/kg	1.00E+00	2.00E+03	2.10E+00	2.21E-01	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.95E-02	mg/kg	1.00E+00		2.87E+00	7.16E+00	NA	1.35E+00	1.35E+00	1.03E-01	1.03E-01
Mercury (methyl)	0.00E+00	mg/L	9.58E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.08E+00	NA	NA		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.41E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00
Nickel	0.00E+00	mg/L	9.33E+00	mg/kg	7.10E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	6.21E-02	6.65E-02	6.65E-02	1.01E-01	1.01E-01
Nitrate	8.67E-01	mg/L	1.30E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Nitrate/Nitrite	7.06E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	8.83E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	4.23E-01	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.80E-01	mg/kg	1.00E+00			1.14E+00	NA	1.88E+01	1.88E+01	1.66E-01	1.66E-01
Selenium	0.00E+00	mg/L	8.67E-01	mg/kg	4.13E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.18E+00	4.99E-01	4.64E-01	4.64E-01	1.95E-01	1.95E-01
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Sulfate	6.09E+00	mg/L	2.00E+01	mg/kg	2.30E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Thallium	0.00E+00	mg/L	7.12E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.04E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Vanadium	3.33E-02	mg/L	0.00E+00	mg/kg	1.53E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03
Zinc	0.00E+00	mg/L	3.82E+01	mg/kg	5.89E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.53E+00	9.78E-01	8.08E-01	8.08E-01	4.51E-01	4.51E-01

Chemical	EED Surface Water mg/kg-d	EED Sediment mg/kg-d	EED Soil mg/kg-d	EED Fish mg/kg-d	EED Aq. Invert. mg/kg-d	EED Terr. Invert. mg/kg-d	EED Aq. Plants mg/kg-d	EED Terr. Plants mg/kg-d	EED Plant Roots mg/kg-d	EED Mammals mg/kg-d	EED Birds mg/kg-d	Total EED mg/kg-d	NOAEL mg/kg-d	EEQ N	LOAEL mg/kg-d	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.22E-01	0.00E+00	1.27E+00	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	1.22E-09	0.00E+00	5.07E-08	0	0.00E+00	1.08E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E-05	1.40E-05	7.77E-01	1.40E-04	7.77E-02	5.48%	3.81%
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	0.00E+00	1.80E-05	0	0.00E+00	2.68E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.70E-03	2.80E-03	9.65E-01	2.80E-02	9.65E-02	6.80%	4.73%
4,4'-DDE	0.00E+00	0.00E+00	5.52E-05	0	0.00E+00	8.28E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.33E-03	5.80E-02	1.44E-01	5.80E-01	1.44E-02	1.01%	0.70%
4,4'-DDT	0.00E+00	0.00E+00	2.86E-05	0	0.00E+00	4.43E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.45E-03	2.80E-03	1.59E+00	2.80E-02	1.59E-01	11.22%	7.80%
Aldrin	0.00E+00	0.00E+00	2.40E-06	0	0.00E+00	3.71E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.73E-04	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	0.00E+00	4.83E-06	0	0.00E+00	7.32E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.36E-04	2.14E+00	3.44E-04	1.07E+01	6.88E-05	0.00%	0.00%
Aluminum	6.11E-01	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.11E-01	1.10E+02	5.57E-03	3.29E+02	1.86E-03	0.04%	0.09%
Antimony	0.00E+00	0.00E+00	8.18E-03	0	0.00E+00	8.96E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.77E-02	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	0.00E+00	3.94E-05	0	0.00E+00	5.98E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.02E-03	4.10E-01	1.47E-02	1.23E+00	4.90E-03	0.10%	0.24%
Aroclor 1248	0.00E+00	0.00E+00	1.82E-05	0	0.00E+00	2.77E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.79E-03	1.80E-01	1.55E-02	1.80E+00	1.55E-03	0.11%	0.08%
Aroclor 1254	0.00E+00	0.00E+00	5.28E-05	0	0.00E+00	8.22E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.27E-03	1.80E-01	4.60E-02	1.80E+00	4.60E-03	0.32%	0.23%
Aroclor 1260	0.00E+00	0.00E+00	9.59E-05	0	0.00E+00	1.57E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.58E-02	1.80E-01	8.78E-02	1.80E+00	8.78E-03	0.62%	0.43%
Aroclor 1268	0.00E+00	0.00E+00	1.09E-05	0	0.00E+00	1.47E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.48E-03	1.80E-01	8.22E-03	1.80E+00	8.22E-04	0.06%	0.04%
Barium	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.08E+01	0.00E+00	4.17E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	0.00E+00	8.73E-04	0	0.00E+00	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.12E-01	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E+00	0.00E+00	3.33E+00	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	2.49E-04	0.00E+00	4.93E-03	0	0.00E+00	1.22E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.23E+00	1.45E+00	8.46E-01	2.00E+01	6.14E-02	5.97%	3.01%
Chlordane	0.00E+00	0.00E+00	2.41E-06	0	0.00E+00	3.65E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.67E-04	2.14E+00	1.71E-04	1.07E+01	3.43E-05	0.00%	0.00%
Chromium	0.00E+00	0.00E+00	1.57E-01	0	0.00E+00	4.78E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.93E+00	1.00E+00	4.93E+00	5.00E+00	9.87E-01	34.80%	48.36%
cis-Nonachlor	0.00E+00	0.00E+00	3.18E-06	0	0.00E+00	4.81E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.85E-04	2.14E+00	2.26E-04	1.07E+01	4.53E-05	0.00%	0.00%
Copper	1.18E-03	0.00E+00	9.54E-02	0	0.00E+00	1.21E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E+00	4.70E+01	2.77E-02	6.17E+01	2.11E-02	0.20%	1.04%
Dieldrin	0.00E+00	0.00E+00	2.38E-06	0	0.00E+00	3.50E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.52E-04	7.70E-02	4.57E-03	2.31E-01	1.52E-03	0.03%	0.07%
Endrin	0.00E+00	0.00E+00	3.53E-06	0	0.00E+00	5.19E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.22E-04	3.00E-01	1.74E-03	9.00E-01	5.80E-04	0.01%	0.03%
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.20E-01	0.00E+00	2.76E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	0.00E+00	2.83E-06	0	0.00E+00	4.22E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.25E-04	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Iron	5.98E-01	0.00E+00	1.29E+02	0	0.00E+00	9.65E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.26E+02	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	5.18E-04	0.00E+00	3.23E-01	0	0.00E+00	1.36E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.69E+00	1.13E+00	1.49E+00	1.13E+01	1.49E-01	10.52%	7.31%
Manganese	4.54E-02	0.00E+00	1.20E+01	0	0.00E+00	2.55E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.76E+01	9.77E+02	3.84E-02	9.77E+03	3.84E-03	0.27%	0.19%
Mercury (inorganic)	0.00E+00	0.00E+00	7.64E-04	0	0.00E+00	5.26E-02	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.33E-02	4.50E-01	1.19E-01	9.00E-01	5.93E-02	0.84%	2.90%
Mercury (methyl)	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	6.40E-03	0.00E+00	6.40E-02	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	0.00E+00	4.38E-06	0	0.00E+00	6.83E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.88E-04	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	0.00E+00	9.12E-02	0	0.00E+00	4.14E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.24E+00	7.74E+01	5.47E-02	1.07E+02	3.96E-02	0.39%	1.94%
Nitrate	8.67E-02	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.67E-02	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	7.06E-03	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.06E-03	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	0.00E+00	2.26E-06	0	0.00E+00	3.32E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.34E-04	2.14E+00	1.56E-04	1.07E+01	3.12E-05	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+02	0.00E+00	3.20E+02	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	0.00E+00	1.13E-05	0	0.00E+00	1.65E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.67E-03	6.73E+00	2.47E-04	6.73E+01	2.47E-05	0.00%	0.00%
Pentachlorophenol	0.00E+00	0.00E+00	5.43E-03	0	0.00E+00	7.74E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.80E-01	6.73E+00	1.16E-01	6.73E+01	1.16E-02	0.82%	0.57%
Perchlorate	0.00E+00	0.00E+00	3.59E-03	0	0.00E+00	3.94E-02	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.30E-02	6.50E+01	6.61E-04	1.30E+02	3.31E-04	0.00%	0.02%
Selenium	0.00E+00	0.00E+00	5.30E-03	0	0.00E+00	6.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.53E-02	1.80E+00	3.63E-02	5.40E+00	1.21E-02	0.26%	0.59%
Silver	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E+00	0.00E+00	5.44E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	0.00E+00	1.83E-01	0	0.00E+00	4.89E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E-01	NA	NA	NA	NA	NA	NA
Sulfate	6.09E-01	0.00E+00	2.95E+00	0	0.00E+00	3.23E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.59E+01	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.50E-01	0.00E+00	1.05E+00	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	0.00E+00	3.90E-06	0	0.00E+00	5.90E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.94E-04	2.14E+00	2.78E-04	1.07E+01	5.55E-05	0.00%	0.00%
Vanadium	3.33E-03	0.00E+00	1.97E-01	0	0.00E+00	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.67E-01	1.14E+01	3.22E-02	3.42E+01	1.07E-02	0.23%	0.53%
Zinc	0.00E+00	0.00E+00	7.56E-01	0	0.00E+00	4.01E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.09E+01	1.45E+01	2.82E+00	1.31E+02	3.12E-01	19.89%	15.30%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.2E-03	2.4E-04	0.01%	0.01%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	2.7E+00	2.7E-01	19.04%	13.23%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.7E-01	2.1E-02	1.21%	1.01%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	6.3E-03	2.1E-03	0.04%	0.10%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\,x\,Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	1	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.002529	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.0243	kg/d
Body weight =	0.197	kg
Home range =	0.74	acres
Water intake rate =	0.0197	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-100
Tier 2 COPCs
EEQs and Hazard Indices for the American Woodcock at LHAAP
Low Impact Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							-----Unitless-----									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.22E-01	0.00E+00	1.27E+00	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	1.07E-08	mg/L	5.59E-06	mg/kg	3.18E-06	mg/kg	#######	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	1.07E-09	0.00E+00	4.09E-08	0	0.00E+00	4.32E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.36E-06	1.40E-05	3.12E-01	1.40E-04	3.12E-02	4.61%	3.77%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	8.00E-04	mg/kg	#######		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.03E-05	0	0.00E+00	8.84E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.94E-04	2.80E-03	3.19E-01	2.80E-02	3.19E-02	4.72%	3.86%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	3.10E-03	mg/kg	#######		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	3.98E-05	0	0.00E+00	3.44E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.48E-03	5.80E-02	6.00E-02	5.80E-01	6.00E-03	0.89%	0.73%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.07E-03	mg/kg	#######		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	1.37E-05	0	0.00E+00	1.22E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.24E-03	2.80E-03	4.41E-01	2.80E-02	4.41E-02	6.53%	5.34%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	#######			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.26E-06	0	0.00E+00	2.01E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.03E-04	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.15E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.05E-06	0	0.00E+00	3.53E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.57E-04	2.14E+00	1.67E-04	1.07E+01	3.34E-05	0.00%	0.00%
Aluminum	4.16E+00	mg/L	8.09E+03	mg/kg	0.00E+00	mg/kg	#######	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	4.16E-01	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.16E-01	1.10E+02	3.79E-03	3.29E+02	1.26E-03	0.06%	0.15%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-01	mg/kg	#######			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	6.54E-03	0	0.00E+00	1.88E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.54E-02	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.55E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.28E-05	0	0.00E+00	2.87E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.90E-03	4.10E-01	7.08E-03	1.23E+00	2.36E-03	0.10%	0.29%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.21E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.55E-05	0	0.00E+00	1.36E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.37E-03	1.80E-01	7.64E-03	1.80E+00	7.64E-04	0.11%	0.09%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	3.32E-03	mg/kg	#######		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	4.26E-05	0	0.00E+00	3.83E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.87E-03	1.80E-01	2.15E-02	1.80E+00	2.15E-03	0.32%	0.26%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	4.07E-03	mg/kg	#######			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	5.23E-05	0	0.00E+00	4.94E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.99E-03	1.80E-01	2.77E-02	1.80E+00	2.77E-03	0.41%	0.34%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	7.92E-04	mg/kg	#######			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.02E-05	0	0.00E+00	7.89E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.99E-04	1.80E-01	4.44E-03	1.80E+00	4.44E-04	0.07%	0.05%
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	0.00E+00	mg/kg	#######	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.08E+01	0.00E+00	4.17E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	5.10E-02	mg/kg	#######			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	6.55E-04	0	0.00E+00	4.81E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.88E-02	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E+00	0.00E+00	3.33E+00	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	2.09E-03	mg/L	4.57E-01	mg/kg	3.02E-01	mg/kg	#######	1.15E+03	6.00E-01	2.87E+01	8.80E-01	1.06E+00	1.06E+00	6.72E-01	6.72E-01	2.09E-04	0.00E+00	3.88E-03	0	0.00E+00	1.07E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.08E+00	1.45E+00	7.42E-01	2.00E+01	5.38E-02	10.98%	6.51%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.22E-06	0	0.00E+00	1.94E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.96E-04	2.14E+00	9.17E-05	1.07E+01	1.83E-05	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E+01	mg/kg	#######	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	0.00E+00	0.00E+00	1.42E-01	0	0.00E+00	4.16E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.58E-01	1.00E+00	5.58E-01	5.00E+00	1.12E-01	8.25%	13.49%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.72E-06	0	0.00E+00	2.38E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-04	2.14E+00	1.12E-04	1.07E+01	2.25E-05	0.00%	0.00%
Copper	9.31E-03	mg/L	6.17E+00	mg/kg	6.53E+00	mg/kg	#######	1.11E+03	1.56E+00	1.45E+00	2.40E-01	6.22E-01	6.22E-01	8.97E-02	8.97E-02	9.31E-04	0.00E+00	8.38E-02	0	0.00E+00	1.17E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.26E+00	4.70E+01	2.67E-02	6.17E+01	2.03E-02	0.40%	2.46%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.72E-04	mg/kg	#######		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.21E-06	0	0.00E+00	1.87E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.89E-04	7.70E-02	2.45E-03	2.31E-01	8.18E-04	0.04%	0.10%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-04	mg/kg	#######			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	3.05E-06	0	0.00E+00	2.58E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.61E-04	3.00E-01	8.71E-04	9.00E-01	2.90E-04	0.01%	0.04%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.20E-01	0.00E+00	2.76E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.93E-04	mg/kg	#######			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.48E-06	0	0.00E+00	2.13E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.16E-04	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Iron	4.18E+00	mg/L	0.00E+00	mg/kg	9.10E+03	mg/kg	#######	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	4.18E-01	0.00E+00	1.17E+02	0	0.00E+00	4.04E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.58E+02	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	#######		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	4.09E-03	mg/L	0.00E+00	mg/kg	2.21E+01	mg/kg	#######	4.48E+02	7.10E-02	4.50E-01	NA	6.78E-02	6.78E-02	1.16E-02	1.16E-02	4.09E-04	0.00E+00	2.83E-01	0	0.00E+00	1.23E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.51E+00	1.13E+00	1.34E+00	1.13E+01	1.34E-01	19.78%	16.16%
Manganese	3.17E-01	mg/L	0.00E+00	mg/kg	8.30E+02	mg/kg	#######	2.50E+02	4.20E-01	2.26E-01	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	3.17E-02	0.00E+00	1.07E+01	0	0.00E+00	2.31E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.38E+01	9.77E+02	3.46E-02	9.77E+03	3.46E-03	0.51%	0.42%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-02	mg/kg	#######		1.14E+00	7.64E+00	NA	1.41E+00	1.41E+00	9.15E-02	9.15E-02	0.00E+00	0.00E+00	6.94E-04	0	0.00E+00	5.09E-02	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.16E-02	4.50E-01	1.15E-01	9.00E-01	5.73E-02	1.70%	6.93%
Mercury (methyl)	0.00E+00	mg/L	8.35E-02	mg/kg	0.00E+00	mg/kg	#######		1.14E+00	NA	1.15E+00	NA	NA			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	6.40E-03	0.00E+00	6.40E-02	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.88E-04	mg/kg	#######			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.70E-06	0	0.00E+00	3.33E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.37E-04	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	mg/L	8.12E+00	mg/kg	6.36E+00	mg/kg	#######		4.86E-01	1.06E+00	6.43E-02	6.84E-02	6.84E-02	8.71E-02	8.71E-02	0.00E+00	0.00E+00	8.16E-02	0	0.00E+00	8.31E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.12E-01	7.74E+01	1.18E-02	1.07E+02	8.53E-03	0.17%	1.03%
Nitrate	4.79E-01	mg/L	9.50E-02	mg/kg	0.00E+00	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	4.79E-02	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.79E-02	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	5.55E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	3.01E+02								5.55E-03	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.55E-03	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E-04	mg/kg	#######			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.19E-06	0	0.00E+00	1.85E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.88E-04	2.14E+00	8.77E-05	1.07E+01	1.75E-05	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+02	0.00E+00	3.20E+02	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.62E-04	mg/kg	#######			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	7.21E-06	0	0.00E+00	6.06E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.14E-04	6.73E+00	9.12E-05	6.73E+01	9.12E-06	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-01	mg/kg	#######			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.18E-03	0	0.00E+00	2.61E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.65E-01	6.73E+00	3.93E-02	6.73E+01	3.93E-03	0.58%	0.48%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	7.70E-02	mg/kg	#######			3.00E-01	NA	3.19E+01	3.19E+01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	9.89E-04	0	0.00E+00	2.85E-03	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.84E-03	6.50E+01	5.91E-05	1.30E+02	2.95E-05	0.00%	0.00%
Selenium	0.00E+00	mg/L	7.51E-01	mg/kg	3.74E-01	mg/kg	#######	2.05E+02	4.50E+00	1.21E+00	4.92E-01	4.59E-01	4.59E-01	1.51E-01	1.51E-01	0.00E+00	0.00E+00	4.80E-03	0	0.00E+00	5.58E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.06E-02	1.80E+00	3.36E-02	5.40E+00	1.12E-02	0.50%	1.36%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E+00	0.00E+00	5.44E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.30E+01	mg/kg	#######		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	1.67E-01	0	0.00E+00	1.39E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.06E-01	NA	NA	NA	NA	NA	NA
Sulfate	5.14E+00	mg/L	1.39E+01	mg/kg	1.30E+02	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	5.14E-01	0.00E+00	1.67E+00	0	0.00E+00	4.81E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.99E+00	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	6.14E-01	mg/kg	0.00E+00	mg/kg	#######	7.50E+01	4.50E+00							0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.50E-01	0.00E+00	1.05E+00	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.24E-06	0	0.00E+00	2.83E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.86E-04	2.14E+00	1.34E-04	1.07E+01	2.68E-05	0.00%	0.00%
Vanadium	2.64E-02	mg/L	0.00E+00	mg/kg	1.45E+01	mg/kg	#######	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	2.64E-03	0.00E+00	1.86E-01	0	0.00E+00	7.50E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.63E-01	1.14E+01	2.31E-02	3.42E+01	7.70E-03	0.34%	0.93%
Zinc	0.00E+00	mg/L	3.22E+01	mg/kg	4.79E+01	mg/kg	#######	2.91E+03	1.94E+00	6.34E+00	1.05E+00	8.84E-01	8.84E-01	1.84E-01	1.84E-01	0.00E+00	0.00E+00	6.16E-01	0	0.00E+00	3.75E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.81E+01	1.45E+01	2.63E+00	1.31E+02	2.91E-01	38.90%	35.20%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	5.9E-04	1.2E-04	0.01%	0.01%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	8.2E-01	8.2E-02	12.15%	9.93%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	6.8E-02	8.5E-03	1.01%	1.03%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	3.3E-03	1.1E-03	0.05%	0.13%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	1	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.002529	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.0243	kg/d
Body weight =	0.197	kg
Home range =	57	acres
Water intake rate =	0.0197	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-101
Tier 1 COPCs
EEQs and Hazard Indices for the Belted Kingfisher at LHAAP
Low Impact Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							Unitless									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.22E-01	0.00E+00	1.27E+00	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	1.22E-08	mg/L	8.87E-06	mg/kg	3.95E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	1.32E-09	6.19E-08	0.00E+00	0.0002538	3.39E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.57E-04	1.40E-05	1.84E+01	1.40E-04	1.84E+00	62.44%	34.79%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.40E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.80E-03	0.00E+00	2.80E-02	0.00E+00	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	4.30E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.80E-02	0.00E+00	5.80E-01	0.00E+00	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.23E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.80E-03	0.00E+00	2.80E-02	0.00E+00	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.87E-04	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.76E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Aluminum	6.11E+00	mg/L	9.69E+03	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	6.61E-01	6.77E+01	0.00E+00	3.2159206	7.63E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.34E+02	1.10E+02	7.60E+00	3.29E+02	2.53E+00	25.84%	47.99%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	6.37E-01	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.07E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.10E-01	0.00E+00	1.23E+00	0.00E+00	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.42E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.11E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	7.47E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.50E-04	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Barium	0.00E+00	mg/L	1.32E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	9.24E-01	0.00E+00	0	1.04E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E+01	2.08E+01	5.45E-01	4.17E+01	2.72E-01	1.85%	5.15%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	6.80E-02	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E+00	0.00E+00	3.33E+00	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	2.49E-03	mg/L	5.48E-01	mg/kg	3.84E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.58E+01	8.11E-01	9.52E-01	9.52E-01	9.22E-01	9.22E-01	2.69E-04	3.83E-03	0.00E+00	0.4961467	7.65E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.77E-01	1.45E+00	3.98E-01	2.00E+01	2.88E-02	1.35%	0.55%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.88E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.22E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Copper	1.18E-02	mg/L	7.20E+00	mg/kg	7.43E+00	mg/kg	1.00E+00	5.92E+03	5.25E+00	1.32E+00	5.86E-01	5.75E-01	5.75E-01	1.49E-01	1.49E-01	1.28E-03	5.03E-02	0.00E+00	8.5473788	6.61E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.26E+00	4.70E+01	1.97E-01	6.17E+01	1.50E-01	0.67%	2.84%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.86E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.70E-02	0.00E+00	2.31E-01	0.00E+00	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.75E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-02	0.00E+00	1.00E-01	0.00E+00	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.20E-01	0.00E+00	2.76E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.20E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Iron	5.98E+00	mg/L	0.00E+00	mg/kg	1.00E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	6.46E-01	0.00E+00	0.00E+00	731.43495	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.32E+02	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	4.26E-04	0.00E+00	0	2.33E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.38E-02	NA	NA	NA	NA	NA	NA
Lead	5.18E-03	mg/L	0.00E+00	mg/kg	2.51E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	4.39E-01	NA	6.40E-02	6.40E-02	1.33E-02	1.33E-02	5.60E-04	0.00E+00	0.00E+00	0.9509063	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.51E-01	3.85E+00	2.47E-01	1.16E+01	8.24E-02	0.84%	1.56%
Manganese	4.54E-01	mg/L	0.00E+00	mg/kg	9.35E+02	mg/kg	1.00E+00	2.00E+03	2.10E+00	2.21E-01	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	4.91E-02	0.00E+00	0.00E+00	111.21782	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E+02	9.77E+02	1.14E-01	9.77E+03	1.14E-02	0.39%	0.22%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.95E-02	mg/kg	1.00E+00		2.87E+00	7.16E+00	NA	1.35E+00	1.35E+00	1.03E-01	1.03E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.50E-01	0.00E+00	9.00E-01	0.00E+00	0.00%	0.00%
Mercury (methyl)	0.00E+00	mg/L	9.58E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.08E+00	NA	NA			0.00E+00	6.69E-04	0.00E+00	0	4.80E-03	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	5.47E-03	6.40E-03	8.55E-01	6.40E-02	8.55E-02	2.90%	1.62%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.41E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	mg/L	9.33E+00	mg/kg	7.10E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	6.21E-02	6.65E-02	6.65E-02	1.01E-01	1.01E-01	0.00E+00	6.51E-02	0.00E+00	0	3.78E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.43E-01	7.74E+01	5.73E-03	1.07E+02	4.14E-03	0.02%	0.08%
Nitrate	8.67E-01	mg/L	1.30E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	9.38E-02	9.06E-04	0.00E+00	113.33843	4.76E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E+02	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	7.06E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03								7.63E-03	0.00E+00	0.00E+00	9.2280445	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.24E+00	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+02	0.00E+00	3.20E+02	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	8.83E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E+00	0.00E+00	6.73E+01	0.00E+00	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	4.23E-01	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E+00	0.00E+00	6.73E+01	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.80E-01	mg/kg	1.00E+00			1.14E+00	NA	1.88E+01	1.88E+01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.50E+01	0.00E+00	1.30E+02	0.00E+00	0.00%	0.00%
Selenium	0.00E+00	mg/L	8.67E-01	mg/kg	4.13E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.18E+00	4.99E-01	4.64E-01	4.64E-01	1.95E-01	1.95E-01	0.00E+00	6.05E-03	0.00E+00	0	6.82E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.42E-02	4.40E-01	1.69E-01	1.50E+00	4.95E-02	0.57%	0.94%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E+00	0.00E+00	5.44E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Sulfate	6.09E+00	mg/L	2.00E+01	mg/kg	2.30E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	6.59E-01	1.39E-01	0.00E+00	796.09765	7.33E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.98E+02	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	7.12E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00							0.00E+00	4.97E-03	0.00E+00	0	5.60E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.10E-02	3.50E-01	1.74E-01	1.05E+00	5.81E-02	0.59%	1.10%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.04E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Vanadium	3.33E-02	mg/L	0.00E+00	mg/kg	1.53E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	3.60E-03	0.00E+00	0.00E+00	4.3524781	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.36E+00	1.14E+01	3.82E-01	3.42E+01	1.27E-01	1.30%	2.41%
Zinc	0.00E+00	mg/L	3.82E+01	mg/kg	5.89E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.53E+00	9.78E-01	8.08E-01	8.08E-01	4.51E-01	4.51E-01	0.00E+00	2.67E-01	0.00E+00	0	5.02E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.29E+00	1.45E+01	3.65E-01	1.31E+02	4.04E-02	1.24%	0.76%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	0.0E+00	0.0E+00	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	0.0E+00	0.0E+00	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi x Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.875	unitless
Aq. Invert diet fraction =	0.125	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0.001034	kg/d
Food ingestion rate =	0.0207	kg/d
Body weight =	0.148	kg
Home range =	118.6101	acres
Water intake rate =	0.016	L/d
Site Area =	262	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-102
Tier 2 COPCs
EEQs and Hazard Indices for the Belted Kingfisher at LHAAP
Low Impact Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							-----	-----	-----	-----Unitless	-----	-----	-----	-----		mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.22E-01	0.00E+00	1.27E+00	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	1.07E-08	mg/L	5.59E-06	mg/kg	3.18E-06	mg/kg	#######	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	1.63E-10	5.52E-09	0.00E+00	4.262E-06	6.45E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.33E-06	1.40E-05	3.09E-01	1.40E-04	3.09E-02	21.57%	7.81%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	8.00E-04	mg/kg	#######		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.80E-03	0.00E+00	2.80E-02	0.00E+00	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	3.10E-03	mg/kg	#######		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.80E-02	0.00E+00	5.80E-01	0.00E+00	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.07E-03	mg/kg	#######		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.80E-03	0.00E+00	2.80E-02	0.00E+00	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	#######			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.15E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Aluminum	4.16E+00	mg/L	8.09E+03	mg/kg	0.00E+00	mg/kg	#######	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	6.35E-02	7.99E+00	0.00E+00	0.3092005	9.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.84E+01	1.10E+02	8.97E-01	3.29E+02	2.99E-01	62.49%	75.43%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-01	mg/kg	#######			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.55E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.10E-01	0.00E+00	1.23E+00	0.00E+00	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.21E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	3.32E-03	mg/kg	#######		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	4.07E-03	mg/kg	#######			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	7.92E-04	mg/kg	#######			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	0.00E+00	mg/kg	#######	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	1.17E-01	0.00E+00	0	1.31E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.43E+00	2.08E+01	6.88E-02	4.17E+01	3.43E-02	4.79%	8.66%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	5.10E-02	mg/kg	#######			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E+00	0.00E+00	3.33E+00	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	2.09E-03	mg/L	4.57E-01	mg/kg	3.02E-01	mg/kg	#######	1.15E+03	6.00E-01	2.87E+01	8.80E-01	1.06E+00	1.06E+00	6.72E-01	6.72E-01	3.19E-05	4.52E-04	0.00E+00	0.0414181	6.78E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.26E-02	1.45E+00	2.94E-02	2.00E+01	2.13E-03	2.05%	0.54%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E+01	mg/kg	#######	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Copper	9.31E-03	mg/L	6.17E+00	mg/kg	6.53E+00	mg/kg	#######	1.11E+03	1.56E+00	1.45E+00	6.44E-01	6.22E-01	6.22E-01	8.97E-02	8.97E-02	1.42E-04	6.09E-03	0.00E+00	0.1790384	2.38E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.09E-01	4.70E+01	4.45E-03	6.17E+01	3.39E-03	0.31%	0.86%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.72E-04	mg/kg	#######		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.70E-02	0.00E+00	2.31E-01	0.00E+00	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-04	mg/kg	#######			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-02	0.00E+00	1.00E-01	0.00E+00	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.20E-01	0.00E+00	2.76E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.93E-04	mg/kg	#######			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Iron	4.18E+00	mg/L	0.00E+00	mg/kg	9.10E+03	mg/kg	#######	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	6.38E-02	0.00E+00	0.00E+00	18.063291	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.81E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	#######		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	6.02E-05	0.00E+00	0	7.04E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.64E-04	NA	NA	NA	NA	NA	NA
Lead	4.09E-03	mg/L	0.00E+00	mg/kg	2.21E+01	mg/kg	#######	4.48E+02	7.10E-02	4.50E-01	NA	6.78E-02	6.78E-02	1.16E-02	1.16E-02	6.25E-05	0.00E+00	0.00E+00	0.0317062	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.18E-02	3.85E+00	8.25E-03	1.16E+01	2.75E-03	0.58%	0.69%
Manganese	3.17E-01	mg/L	0.00E+00	mg/kg	8.30E+02	mg/kg	#######	2.50E+02	4.20E-01	2.26E-01	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	4.84E-03	0.00E+00	0.00E+00	1.369889	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.37E+00	9.77E+02	1.41E-03	9.77E+03	1.41E-04	0.10%	0.04%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-02	mg/kg	#######		1.14E+00	7.64E+00	NA	1.41E+00	1.41E+00	9.15E-02	9.15E-02	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.50E-01	0.00E+00	9.00E-01	0.00E+00	0.00%	0.00%
Mercury (methyl)	0.00E+00	mg/L	8.35E-02	mg/kg	0.00E+00	mg/kg	#######		1.14E+00	NA	1.15E+00	NA	NA			0.00E+00	8.24E-05	0.00E+00	0	2.34E-04	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	3.17E-04	6.40E-03	4.95E-02	6.40E-02	4.95E-03	3.45%	1.25%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.88E-04	mg/kg	#######			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	mg/L	8.12E+00	mg/kg	6.36E+00	mg/kg	#######		4.86E-01	1.06E+00	6.43E-02	6.84E-02	6.84E-02	8.71E-02	8.71E-02	0.00E+00	8.02E-03	0.00E+00	0	9.76E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.78E-02	7.74E+01	2.30E-04	1.07E+02	1.66E-04	0.02%	0.04%
Nitrate	4.79E-01	mg/L	9.50E-02	mg/kg	0.00E+00	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	7.32E-03	9.38E-05	0.00E+00	2.4931816	9.86E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E+00	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	5.55E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	3.01E+02								8.48E-04	0.00E+00	0.00E+00	0.2889188	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.90E-01	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E-04	mg/kg	#######			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+02	0.00E+00	3.20E+02	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.62E-04	mg/kg	#######			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E+00	0.00E+00	6.73E+01	0.00E+00	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-01	mg/kg	#######			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E+00	0.00E+00	6.73E+01	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	7.70E-02	mg/kg	#######			3.00E-01	NA	3.19E+01	3.19E+01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.50E+01	0.00E+00	1.30E+02	0.00E+00	0.00%	0.00%
Selenium	0.00E+00	mg/L	7.51E-01	mg/kg	3.74E-01	mg/kg	#######	2.05E+02	4.50E+00	1.21E+00	4.92E-01	4.59E-01	4.59E-01	1.51E-01	1.51E-01	0.00E+00	7.41E-04	0.00E+00	0	8.35E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.09E-03	4.40E-01	2.07E-02	1.50E+00	6.06E-03	1.44%	1.53%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E+00	0.00E+00	5.44E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.30E+01	mg/kg	#######		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Sulfate	5.14E+00	mg/L	1.39E+01	mg/kg	1.30E+02	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	7.85E-02	1.37E-02	0.00E+00	26.731493	1.44E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+01	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	6.14E-01	mg/kg	0.00E+00	mg/kg	#######	7.50E+01	4.50E+00							0.00E+00	6.06E-04	0.00E+00	0	6.83E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.43E-03	3.50E-01	2.12E-02	1.05E+00	7.08E-03	1.48%	1.79%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Vanadium	2.64E-02	mg/L	0.00E+00	mg/kg	1.45E+01	mg/kg	#######	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	4.03E-04	0.00E+00	0.00E+00	0.1373744	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.38E-01	1.14E+01	1.21E-02	3.42E+01	4.03E-03	0.84%	1.02%
Zinc	0.00E+00	mg/L	3.22E+01	mg/kg	4.79E+01	mg/kg	#######	2.91E+03	1.94E+00	6.34E+00	1.05E+00	8.84E-01	8.84E-01	1.84E-01	1.84E-01	0.00E+00	3.18E-02	0.00E+00	0	1.54E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.86E-01	1.45E+01	1.28E-02	1.31E+02	1.42E-03	0.89%	0.36%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	0.0E+00	0.0E+00	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	0.0E+00	0.0E+00	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.875	unitless
Aq. Invert diet fraction =	0.125	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0.001034	kg/d
Food ingestion rate =	0.0207	kg/d
Body weight =	0.148	kg
Home range =	1853	acres
Water intake rate =	0.016	L/d
Site Area =	262	acres
Area Use Factor (AUF) =	0.141392	unitless
Exposure Duration (ED) =	1	unitless

Table E-103
Tier 1 COPCs
EEQs and Hazard Indices for the Red-tailed Hawk at LHAAP
Low Impact Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							-----Unitless-----									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.22E-01	0.00E+00	1.27E+00	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	1.22E-08	mg/L	8.87E-06	mg/kg	3.95E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	6.93E-10	0.00E+00	2.38E-09	1.623E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.56E-09	7.96E-10	1.62E-05	1.40E-05	1.16E+00	1.40E-04	1.16E-01	79.60%	65.59%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.40E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	8.43E-07	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.06E-05	5.35E-06	3.68E-05	2.80E-03	1.31E-02	2.80E-02	1.31E-03	0.90%	0.74%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	4.30E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	2.59E-06	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.11E-05	1.42E-05	9.78E-05	5.80E-02	1.69E-03	5.80E-01	1.69E-04	0.12%	0.10%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.23E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	0.00E+00	1.34E-06	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.03E-05	1.23E-05	8.39E-05	2.80E-03	3.00E-02	2.80E-02	3.00E-03	2.06%	1.69%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.87E-04	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.13E-07	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.09E-06	7.14E-07	4.92E-06	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.76E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.27E-07	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.22E-06	1.44E-06	9.89E-06	2.14E+00	4.62E-06	1.07E+01	9.24E-07	0.00%	0.00%
Aluminum	6.11E+00	mg/L	9.69E+03	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	3.47E-01	0.00E+00	0.00E+00	0.2056948	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.53E-01	1.10E+02	5.04E-03	3.29E+02	1.68E-03	0.35%	0.95%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	6.37E-01	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	3.83E-04	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.01E-03	3.51E-04	2.74E-03	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.07E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.85E-06	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.71E-05	1.17E-05	8.06E-05	4.10E-01	1.97E-04	1.23E+00	6.56E-05	0.01%	0.04%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.42E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	8.54E-07	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.10E-05	5.42E-06	3.73E-05	1.80E-01	2.07E-04	1.80E+00	2.07E-05	0.01%	0.01%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.11E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	0.00E+00	2.47E-06	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.28E-05	1.45E-05	9.97E-05	1.80E-01	5.54E-04	1.80E+00	5.54E-05	0.04%	0.03%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	7.47E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	4.50E-06	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.72E-04	4.75E-05	3.24E-04	1.80E-01	1.80E-03	1.80E+00	1.80E-04	0.12%	0.10%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.50E-04	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	5.12E-07	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.86E-05	3.24E-06	2.23E-05	1.80E-01	1.24E-04	1.80E+00	1.24E-05	0.01%	0.01%
Barium	0.00E+00	mg/L	1.32E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.08E+01	0.00E+00	4.17E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	6.80E-02	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.09E-05	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.49E-03	2.59E-04	1.79E-03	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E+00	0.00E+00	3.33E+00	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	2.49E-03	mg/L	5.48E-01	mg/kg	3.84E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.58E+01	8.11E-01	9.52E-01	9.52E-01	9.22E-01	9.22E-01	1.41E-04	0.00E+00	2.31E-04	0.0317342	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.72E-03	1.17E-03	4.00E-02	1.45E+00	2.76E-02	2.00E+01	2.00E-03	1.89%	1.13%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.88E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.13E-07	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.10E-06	7.16E-07	4.93E-06	2.14E+00	2.30E-06	1.07E+01	4.60E-07	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.22E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	0.00E+00	0.00E+00	7.37E-03	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.74E-02	1.35E-02	9.83E-02	1.00E+00	9.83E-02	5.00E+00	1.97E-02	6.74%	11.11%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.49E-07	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.41E-06	9.45E-07	6.51E-06	2.14E+00	3.04E-06	1.07E+01	6.08E-07	0.00%	0.00%
Copper	1.18E-02	mg/L	7.20E+00	mg/kg	7.43E+00	mg/kg	1.00E+00	5.92E+03	5.25E+00	1.32E+00	5.86E-01	5.75E-01	5.75E-01	1.49E-01	1.49E-01	6.71E-04	0.00E+00	4.47E-03	0.5467023	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.11E-02	3.68E-03	5.77E-01	4.70E+01	1.23E-02	6.17E+01	9.34E-03	0.84%	5.28%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.86E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.12E-07	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.06E-06	7.08E-07	4.88E-06	7.70E-02	6.33E-05	2.31E-01	2.11E-05	0.00%	0.01%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.75E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	1.66E-07	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.35E-06	1.11E-06	7.63E-06	1.00E-02	7.63E-04	1.00E-01	7.63E-05	0.05%	0.04%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.20E-01	0.00E+00	2.76E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.20E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.33E-07	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.82E-06	8.41E-07	5.79E-06	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Iron	5.98E+00	mg/L	0.00E+00	mg/kg	1.00E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	3.40E-01	0.00E+00	6.04E+00	46.783605	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.94E-01	6.87E-02	5.36E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	5.18E-03	mg/L	0.00E+00	mg/kg	2.51E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	4.39E-01	NA	6.40E-02	6.40E-02	1.33E-02	1.33E-02	2.94E-04	0.00E+00	1.51E-02	0.0608213	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	6.34E-03	1.11E-03	8.37E-02	3.85E+00	2.17E-02	1.16E+01	7.25E-03	1.49%	4.10%
Manganese	4.54E-01	mg/L	0.00E+00	mg/kg	9.35E+02	mg/kg	1.00E+00	2.00E+03	2.10E+00	2.21E-01	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	2.58E-02	0.00E+00	5.63E-01	7.1136474	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.70E-01	2.97E-02	7.90E+00	9.77E+02	8.09E-03	9.77E+03	8.09E-04	0.55%	0.46%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.95E-02	mg/kg	1.00E+00		2.87E+00	7.16E+00	NA	1.35E+00	1.35E+00	1.03E-01	1.03E-01	0.00E+00	0.00E+00	3.58E-05	0	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	1.16E-04	2.03E-05	1.72E-04	4.50E-01	3.83E-04	9.00E-01	1.92E-04	0.03%	0.11%
Mercury (methyl)	0.00E+00	mg/L	9.58E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.08E+00	NA	NA			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	6.40E-03	0.00E+00	6.40E-02	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.41E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.05E-07	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.46E-06	1.30E-06	8.97E-06	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	mg/L	9.33E+00	mg/kg	7.10E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	6.21E-02	6.65E-02	6.65E-02	1.01E-01	1.01E-01	0.00E+00	0.00E+00	4.28E-03	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E-02	2.38E-03	2.03E-02	7.74E+01	2.62E-04	1.07E+02	1.89E-04	0.02%	0.11%
Nitrate	8.67E-01	mg/L	1.30E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	4.93E-02	0.00E+00	0.00E+00	7.2492849	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.30E+00	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	7.06E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03								4.01E-03	0.00E+00	0.00E+00	0.5902387	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.94E-01	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.06E-07	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.84E-06	6.71E-07	4.62E-06	2.14E+00	2.16E-06	1.07E+01	4.32E-07	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+02	0.00E+00	3.20E+02	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	8.83E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	5.32E-07	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.93E-05	3.37E-06	2.32E-05	6.73E+00	3.45E-06	6.73E+01	3.45E-07	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	4.23E-01	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.54E-04	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.24E-03	1.61E-03	1.11E-02	6.73E+00	1.65E-03	6.73E+01	1.65E-04	0.11%	0.09%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.80E-01	mg/kg	1.00E+00			1.14E+00	NA	1.88E+01	1.88E+01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	1.69E-04	0	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	8.83E-04	1.54E-04	1.21E-03	6.50E+01	1.85E-05	1.30E+02	9.27E-06	0.00%	0.01%
Selenium	0.00E+00	mg/L	8.67E-01	mg/kg	4.13E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.18E+00	4.99E-01	4.64E-01	4.64E-01	1.95E-01	1.95E-01	0.00E+00	0.00E+00	2.48E-04	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.53E-03	2.66E-04	2.04E-03	4.40E-01	4.64E-03	1.50E+00	1.36E-03	0.32%	0.77%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E+00	0.00E+00	5.44E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	8.59E-03	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.50E-02	7.85E-03	6.14E-02	NA	NA	NA	NA	NA	NA
Sulfate	6.09E+00	mg/L	2.00E+01	mg/kg	2.30E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	3.46E-01	0.00E+00	1.38E-01	50.919522	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.25E-01	1.27E-01	5.23E+01	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	7.12E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00							0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.50E-01	0.00E+00	1.05E+00	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.04E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.83E-07	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.63E-06	1.16E-06	7.98E-06	2.14E+00	3.73E-06	1.07E+01	7.45E-07	0.00%	0.00%
Vanadium	3.33E-02	mg/L	0.00E+00	mg/kg	1.53E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	1.89E-03	0.00E+00	9.23E-03	0.2783906	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.72E-03	3.01E-04	2.92E-01	1.14E+01	2.56E-02	3.42E+01	8.52E-03	1.75%	4.82%
Zinc	0.00E+00	mg/L	3.82E+01	mg/kg	5.89E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.53E+00	9.78E-01	8.08E-01	8.08E-01	4.51E-01	4.51E-01	0.00E+00	0.00E+00	3.54E-02	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.03E-01	8.79E-02	6.27E-01	1.45E+01	4.32E-02	1.31E+02	4.78E-03	2.97%	2.70%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.6E-05	3.2E-06	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	4.5E-02	4.5E-03	3.07%	2.53%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	2.9E-03	3.3E-04	0.20%	0.19%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	8.3E-04	9.7E-05	0.06%	0.06%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.26	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0.63	unitless
Bird diet fraction =	0.11	unitless
Soil ingestion rate =	0.000678	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.0339	kg/d
Body weight =	1.126	kg
Home range =	941	acres
Water intake rate =	0.064	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-104
Tier 2 COPCs
EEQs and Hazard Indices for the Red-tailed Hawk at LHAAP
Low Impact Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
									-----	-----	Unitless	-----	-----	-----		mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.22E-01	0.00E+00	1.27E+00	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	1.07E-08	mg/L	5.59E-06	mg/kg	3.18E-06	mg/kg	#######	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	6.07E-10	0.00E+00	1.92E-09	1.928E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.85E-09	4.98E-10	1.93E-06	1.40E-05	1.38E-01	1.40E-04	1.38E-02	57.35%	41.56%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	8.00E-04	mg/kg	#######		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.82E-07	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E-05	2.32E-06	1.61E-05	2.80E-03	5.75E-03	2.80E-02	5.75E-04	2.39%	1.73%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	3.10E-03	mg/kg	#######		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	1.87E-06	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.54E-05	9.67E-06	6.69E-05	5.80E-02	1.15E-03	5.80E-01	1.15E-04	0.48%	0.35%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.07E-03	mg/kg	#######		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	6.43E-07	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-05	3.14E-06	2.17E-05	2.80E-03	7.77E-03	2.80E-02	7.77E-04	3.22%	2.34%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	#######			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.06E-07	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.93E-06	5.11E-07	3.54E-06	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.15E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.90E-07	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.24E-06	9.15E-07	6.34E-06	2.14E+00	2.96E-06	1.07E+01	5.93E-07	0.00%	0.00%
Aluminum	4.16E+00	mg/L	8.09E+03	mg/kg	0.00E+00	mg/kg	#######	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	2.36E-01	0.00E+00	0.00E+00	0.1398725	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.76E-01	1.10E+02	3.43E-03	3.29E+02	1.14E-03	1.42%	3.44%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-01	mg/kg	#######			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	3.07E-04	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E-03	1.87E-04	1.56E-03	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.55E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.54E-06	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.24E-05	7.41E-06	5.14E-05	4.10E-01	1.25E-04	1.23E+00	4.18E-05	0.05%	0.13%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.21E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	7.27E-07	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.01E-05	3.51E-06	2.43E-05	1.80E-01	1.35E-04	1.80E+00	1.35E-05	0.06%	0.04%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	3.32E-03	mg/kg	#######		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	2.00E-06	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.13E-05	5.47E-06	3.88E-05	1.80E-01	2.15E-04	1.80E+00	2.15E-05	0.09%	0.06%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	4.07E-03	mg/kg	#######			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	2.45E-06	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.29E-04	2.25E-05	1.54E-04	1.80E-01	8.55E-04	1.80E+00	8.55E-05	0.36%	0.26%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	7.92E-04	mg/kg	#######			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.77E-07	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.32E-05	2.30E-06	1.59E-05	1.80E-01	8.86E-05	1.80E+00	8.86E-06	0.04%	0.03%
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	0.00E+00	mg/kg	#######	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.08E+01	0.00E+00	4.17E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	5.10E-02	mg/kg	#######			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.07E-05	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.48E-04	1.48E-04	1.03E-03	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E+00	0.00E+00	3.33E+00	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	2.09E-03	mg/L	4.57E-01	mg/kg	3.02E-01	mg/kg	#######	1.15E+03	6.00E-01	2.87E+01	8.80E-01	1.06E+00	1.06E+00	6.72E-01	6.72E-01	1.19E-04	0.00E+00	1.82E-04	0.0187362	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.86E-03	6.74E-04	2.36E-02	1.45E+00	1.63E-02	2.00E+01	1.18E-03	6.75%	3.55%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.04E-07	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.88E-06	5.02E-07	3.48E-06	2.14E+00	1.63E-06	1.07E+01	3.25E-07	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E+01	mg/kg	#######	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	0.00E+00	0.00E+00	6.63E-03	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.77E-02	3.09E-03	2.74E-02	1.00E+00	2.74E-02	5.00E+00	5.48E-03	11.38%	16.49%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.28E-07	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.52E-06	6.15E-07	4.27E-06	2.14E+00	1.99E-06	1.07E+01	3.99E-07	0.00%	0.00%
Copper	9.31E-03	mg/L	6.17E+00	mg/kg	6.53E+00	mg/kg	#######	1.11E+03	1.56E+00	1.45E+00	6.44E-01	6.22E-01	6.22E-01	8.97E-02	8.97E-02	5.29E-04	0.00E+00	3.93E-03	0.0809913	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E-02	1.94E-03	9.85E-02	4.70E+01	2.10E-03	6.17E+01	1.60E-03	0.87%	4.80%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.72E-04	mg/kg	#######		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.03E-07	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.86E-06	4.99E-07	3.46E-06	7.70E-02	4.49E-05	2.31E-01	1.50E-05	0.02%	0.05%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-04	mg/kg	#######			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	1.43E-07	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.48E-06	9.56E-07	6.58E-06	1.00E-02	6.58E-04	1.00E-01	6.58E-05	0.27%	0.20%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.20E-01	0.00E+00	2.76E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.93E-04	mg/kg	#######			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.16E-07	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.21E-06	5.60E-07	3.89E-06	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Iron	4.18E+00	mg/L	0.00E+00	mg/kg	9.10E+03	mg/kg	#######	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	2.37E-01	0.00E+00	5.48E+00	8.171259	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.03E-01	5.30E-02	1.42E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	#######		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	4.09E-03	mg/L	0.00E+00	mg/kg	2.21E+01	mg/kg	#######	4.48E+02	7.10E-02	4.50E-01	NA	6.78E-02	6.78E-02	1.16E-02	1.16E-02	2.32E-04	0.00E+00	1.33E-02	0.0143429	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	4.88E-03	8.51E-04	3.36E-02	3.85E+00	8.73E-03	1.16E+01	2.91E-03	3.62%	8.75%
Manganese	3.17E-01	mg/L	0.00E+00	mg/kg	8.30E+02	mg/kg	#######	2.50E+02	4.20E-01	2.26E-01	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	1.80E-02	0.00E+00	4.99E-01	0.6196943	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.19E-01	2.08E-02	1.28E+00	9.77E+02	1.31E-03	9.77E+03	1.31E-04	0.54%	0.39%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-02	mg/kg	#######		1.14E+00	7.64E+00	NA	1.41E+00	1.41E+00	9.15E-02	9.15E-02	0.00E+00	0.00E+00	3.25E-05	0	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	9.37E-05	1.64E-05	1.43E-04	4.50E-01	3.17E-04	9.00E-01	1.58E-04	0.13%	0.48%
Mercury (methyl)	0.00E+00	mg/L	8.35E-02	mg/kg	0.00E+00	mg/kg	#######		1.14E+00	NA	1.15E+00	NA	NA			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	6.40E-03	0.00E+00	6.40E-02	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.88E-04	mg/kg	#######			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.74E-07	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.80E-06	8.37E-07	5.81E-06	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	mg/L	8.12E+00	mg/kg	6.36E+00	mg/kg	#######		4.86E-01	1.06E+00	6.43E-02	6.84E-02	6.84E-02	8.71E-02	8.71E-02	0.00E+00	0.00E+00	3.83E-03	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E-02	1.83E-03	1.62E-02	7.74E+01	2.09E-04	1.07E+02	1.51E-04	0.09%	0.45%
Nitrate	4.79E-01	mg/L	9.50E-02	mg/kg	0.00E+00	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	2.72E-02	0.00E+00	0.00E+00	1.1278361	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.16E+00	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	5.55E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	3.01E+02								3.15E-03	0.00E+00	0.00E+00	0.1306977	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.34E-01	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E-04	mg/kg	#######			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.03E-07	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.84E-06	4.95E-07	3.43E-06	2.14E+00	1.60E-06	1.07E+01	3.21E-07	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+02	0.00E+00	3.20E+02	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.62E-04	mg/kg	#######			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.38E-07	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.34E-06	1.63E-06	1.13E-05	6.73E+00	1.68E-06	6.73E+01	1.68E-07	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-01	mg/kg	#######			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.49E-04	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.11E-03	7.18E-04	4.98E-03	6.73E+00	7.40E-04	6.73E+01	7.40E-05	0.31%	0.22%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	7.70E-02	mg/kg	#######			3.00E-01	NA	3.19E+01	3.19E+01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	4.64E-05	0	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	1.62E-04	2.82E-05	2.36E-04	6.50E+01	3.64E-06	1.30E+02	1.82E-06	0.00%	0.01%
Selenium	0.00E+00	mg/L	7.51E-01	mg/kg	3.74E-01	mg/kg	#######	2.05E+02	4.50E+00	1.21E+00	4.92E-01	4.59E-01	4.59E-01	1.51E-01	1.51E-01	0.00E+00	0.00E+00	2.25E-04	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E-03	1.87E-04	1.48E-03	4.40E-01	3.37E-03	1.50E+00	9.88E-04	1.40%	2.97%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E+00	0.00E+00	5.44E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.30E+01	mg/kg	#######		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	7.82E-03	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.73E-02	4.76E-03	3.99E-02	NA	NA	NA	NA	NA	NA
Sulfate	5.14E+00	mg/L	1.39E+01	mg/kg	1.30E+02	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	2.92E-01	0.00E+00	7.82E-02	12.092478	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.73E-01	4.77E-02	1.28E+01	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	6.14E-01	mg/kg	0.00E+00	mg/kg	#######	7.50E+01	4.50E+00							0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.50E-01	0.00E+00	1.05E+00	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.52E-07	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.20E-06	7.33E-07	5.08E-06	2.14E+00	2.38E-06	1.07E+01	4.75E-07	0.00%	0.00%
Vanadium	2.64E-02	mg/L	0.00E+00	mg/kg	1.45E+01	mg/kg	#######	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	1.50E-03	0.00E+00	8.71E-03	0.0621438	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.51E-03	2.63E-04	7.41E-02	1.14E+01	6.50E-03	3.42E+01	2.17E-03	2.70%	6.52%
Zinc	0.00E+00	mg/L	3.22E+01	mg/kg	4.79E+01	mg/kg	#######	2.91E+03	1.94E+00	6.34E+00	1.05E+00	8.84E-01	8.84E-01	1.84E-01	1.84E-01	0.00E+00	0.00E+00	2.89E-02	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.67E-01	2.92E-02	2.26E-01	1.45E+01	1.56E-02	1.31E+02	1.72E-03	6.46%	5.18%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.1E-05	2.1E-06	0.00%	0.01%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	1.5E-02	1.5E-03	6.09%	4.42%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.4E-03	1.7E-04	0.59%	0.52%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	7.0E-04	8.1E-05	0.29%	0.24%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.26	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0.63	unitless
Bird diet fraction =	0.11	unitless
Soil ingestion rate =	0.000678	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.0339	kg/d
Body weight =	1.126	kg
Home range =	1722	acres
Water intake rate =	0.064	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-105
Tier 1 COPCs
EEQs and Hazard Indices for the Deer Mouse at LHAAP
Low Impact Sub-Area/Harrison Bayou Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
							Unitless								
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00
2,3,7,8-TCDD TEQ	9.44E-09	mg/L	1.41E-05	mg/kg	3.95E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.40E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	4.30E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.23E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.87E-04	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.76E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Aluminum	2.03E+01	mg/L	1.03E+04	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	6.37E-01	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.07E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.42E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.11E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	7.47E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.50E-04	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00
Barium	0.00E+00	mg/L	2.86E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	6.80E-02	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.82E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00
Cadmium	0.00E+00	mg/L	1.83E-01	mg/kg	3.84E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.58E+01	1.33E+00	9.52E-01	9.52E-01	9.22E-01	9.22E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.88E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Chromium	1.27E-02	mg/L	0.00E+00	mg/kg	1.22E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Copper	1.69E-02	mg/L	7.78E+00	mg/kg	7.43E+00	mg/kg	1.00E+00	5.92E+03	5.25E+00	1.32E+00	5.59E-01	5.75E-01	5.75E-01	1.49E-01	1.49E-01
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.86E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.75E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.20E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00
Iron	2.91E+01	mg/L	0.00E+00	mg/kg	1.00E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01		
Lead	7.24E-03	mg/L	0.00E+00	mg/kg	2.51E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	4.39E-01	NA	6.40E-02	6.40E-02	1.33E-02	1.33E-02
Manganese	9.37E-01	mg/L	0.00E+00	mg/kg	9.35E+02	mg/kg	1.00E+00	2.00E+03	2.10E+00	2.21E-01	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.95E-02	mg/kg	1.00E+00		2.87E+00	7.16E+00	NA	1.35E+00	1.35E+00	1.03E-01	1.03E-01
Mercury (methyl)	0.00E+00	mg/L	8.29E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.16E+00	NA	NA		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.41E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00
Nickel	0.00E+00	mg/L	1.10E+01	mg/kg	7.10E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	5.96E-02	6.65E-02	6.65E-02	1.01E-01	1.01E-01
Nitrate	7.46E-01	mg/L	7.48E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Nitrate/Nitrite	5.84E+01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	8.83E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	4.23E-01	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.80E-01	mg/kg	1.00E+00			1.14E+00	NA	1.88E+01	1.88E+01	1.66E-01	1.66E-01
Selenium	4.63E-03	mg/L	9.08E-01	mg/kg	4.13E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.18E+00	5.02E-01	4.64E-01	4.64E-01	1.95E-01	1.95E-01
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Sulfate	5.76E+01	mg/L	7.51E+01	mg/kg	2.30E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Thallium	7.55E-04	mg/L	6.00E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.04E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Vanadium	6.18E-02	mg/L	0.00E+00	mg/kg	1.53E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03
Zinc	0.00E+00	mg/L	3.58E+01	mg/kg	5.89E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.53E+00	1.01E+00	8.08E-01	8.08E-01	4.51E-01	4.51E-01

Chemical	EED Surface Water (mg/kg-d)	EED Sediment (mg/kg-d)	EED Soil (mg/kg-d)	EED Fish (mg/kg-d)	EED Aq. Invert. (mg/kg-d)	EED Terr. Invert. (mg/kg-d)	EED Aq. Plants (mg/kg-d)	EED Terr. Plants (mg/kg-d)	EED Plant Roots (mg/kg-d)	EED Mammals (mg/kg-d)	EED Birds (mg/kg-d)	Total EED (mg/kg-d)	NOAEL (mg/kg-d)	EEQ N	LOAEL (mg/kg-d)	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	2.83E-09	0.00E+00	7.32E-09	0.00E+00	0.00E+00	4.07E-06	0.00E+00	8.32E-10	0.00E+00	0.00E+00	0.00E+00	4.08E-06	1.00E-06	4.08E+00	1.00E-05	4.08E-01	35.88%	27.66%
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	0.00E+00	2.60E-06	0.00E+00	0.00E+00	1.01E-03	0.00E+00	5.20E-06	0.00E+00	0.00E+00	0.00E+00	1.02E-03	8.00E-01	1.27E-03	4.00E+00	2.54E-04	0.01%	0.02%
4,4'-DDE	0.00E+00	0.00E+00	7.98E-06	0.00E+00	0.00E+00	3.11E-03	0.00E+00	1.24E-04	0.00E+00	0.00E+00	0.00E+00	3.24E-03	8.00E-01	4.05E-03	4.00E+00	8.11E-04	0.04%	0.05%
4,4'-DDT	0.00E+00	0.00E+00	4.13E-06	0.00E+00	0.00E+00	1.66E-03	0.00E+00	8.27E-06	0.00E+00	0.00E+00	0.00E+00	1.68E-03	8.00E-01	2.09E-03	4.00E+00	4.19E-04	0.02%	0.03%
Aldrin	0.00E+00	0.00E+00	3.47E-07	0.00E+00	0.00E+00	1.39E-04	0.00E+00	5.88E-08	0.00E+00	0.00E+00	0.00E+00	1.40E-04	2.00E-01	6.99E-04	1.00E+00	1.40E-04	0.01%	0.01%
alpha-Chlordane	0.00E+00	0.00E+00	6.98E-07	0.00E+00	0.00E+00	2.75E-04	0.00E+00	7.03E-07	0.00E+00	0.00E+00	0.00E+00	2.76E-04	4.58E+00	6.03E-05	9.16E+00	3.02E-05	0.00%	0.00%
Aluminum	6.10E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.10E+00	1.93E+00	3.16E+00	1.93E+01	3.16E-01	27.78%	21.42%
Antimony	0.00E+00	0.00E+00	1.18E-03	0.00E+00	0.00E+00	3.37E-02	0.00E+00	2.07E-03	0.00E+00	0.00E+00	0.00E+00	3.69E-02	1.25E-01	2.95E-01	1.25E+00	2.95E-02	2.60%	2.00%
Aroclor 1242	0.00E+00	0.00E+00	5.69E-06	0.00E+00	0.00E+00	2.25E-03	0.00E+00	2.32E-05	0.00E+00	0.00E+00	0.00E+00	2.28E-03	6.85E-02	3.33E-02	6.85E-01	3.33E-03	0.29%	0.23%
Aroclor 1248	0.00E+00	0.00E+00	2.63E-06	0.00E+00	0.00E+00	1.04E-03	0.00E+00	6.65E-07	0.00E+00	0.00E+00	0.00E+00	1.04E-03	6.80E-02	1.53E-02	6.80E-01	1.53E-03	0.14%	0.10%
Aroclor 1254	0.00E+00	0.00E+00	7.62E-06	0.00E+00	0.00E+00	3.09E-03	0.00E+00	1.68E-06	0.00E+00	0.00E+00	0.00E+00	3.10E-03	6.80E-02	4.56E-02	6.80E-01	4.56E-03	0.40%	0.31%
Aroclor 1260	0.00E+00	0.00E+00	1.39E-05	0.00E+00	0.00E+00	5.91E-03	0.00E+00	1.57E-06	0.00E+00	0.00E+00	0.00E+00	5.92E-03	6.80E-02	8.71E-02	6.80E-01	8.71E-03	0.77%	0.59%
Aroclor 1268	0.00E+00	0.00E+00	1.58E-06	0.00E+00	0.00E+00	5.52E-04	0.00E+00	2.07E-05	0.00E+00	0.00E+00	0.00E+00	5.74E-04	6.80E-02	8.44E-03	6.80E-01	8.44E-04	0.07%	0.06%
Barium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E+00	0.00E+00	1.98E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	0.00E+00	1.26E-04	0.00E+00	0.00E+00	4.18E-02	0.00E+00	1.01E-02	0.00E+00	0.00E+00	0.00E+00	5.21E-02	4.00E+00	1.30E-02	4.00E+01	1.30E-03	0.11%	0.09%
bis(2-ethylhexyl)phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	0.00E+00	7.12E-04	0.00E+00	0.00E+00	4.59E-01	0.00E+00	1.69E-02	0.00E+00	0.00E+00	0.00E+00	4.77E-01	1.00E+00	4.77E-01	1.00E+01	4.77E-02	4.20%	3.24%
Chlordane	0.00E+00	0.00E+00	3.48E-07	0.00E+00	0.00E+00	1.37E-04	0.00E+00	3.51E-07	0.00E+00	0.00E+00	0.00E+00	1.38E-04	4.58E+00	3.01E-05	9.16E+00	1.50E-05	0.00%	0.00%
Chromium	3.80E-03	0.00E+00	2.27E-02	0.00E+00	0.00E+00	1.80E+00	0.00E+00	2.72E-01	0.00E+00	0.00E+00	0.00E+00	2.09E+00	3.28E+00	6.38E-01	1.31E+01	1.59E-01	5.62%	10.81%
cis-Nonachlor	0.00E+00	0.00E+00	4.59E-07	0.00E+00	0.00E+00	1.81E-04	0.00E+00	4.63E-07	0.00E+00	0.00E+00	0.00E+00	1.82E-04	4.58E+00	3.97E-05	9.16E+00	1.99E-05	0.00%	0.00%
Copper	5.07E-03	0.00E+00	1.38E-02	0.00E+00	0.00E+00	4.54E-01	0.00E+00	1.98E-01	0.00E+00	0.00E+00	0.00E+00	6.71E-01	1.17E+01	5.73E-02	1.51E+01	4.43E-02	0.50%	3.00%
Dieldrin	0.00E+00	0.00E+00	3.44E-07	0.00E+00	0.00E+00	1.31E-04	0.00E+00	1.41E-05	0.00E+00	0.00E+00	0.00E+00	1.46E-04	2.00E-02	7.29E-03	2.00E-01	7.29E-04	0.06%	0.05%
Endrin	0.00E+00	0.00E+00	5.11E-07	0.00E+00	0.00E+00	1.95E-04	0.00E+00	4.88E-07	0.00E+00	0.00E+00	0.00E+00	1.96E-04	9.20E-02	2.13E-03	9.20E-01	2.13E-04	0.02%	0.01%
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	0.00E+00	4.09E-07	0.00E+00	0.00E+00	1.59E-04	0.00E+00	1.93E-07	0.00E+00	0.00E+00	0.00E+00	1.59E-04	8.00E-02	1.99E-03	2.90E-01	5.49E-04	0.02%	0.04%
HMX	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	8.73E+00	0.00E+00	1.86E+01	0.00E+00	0.00E+00	3.63E+01	0.00E+00	1.86E+00	0.00E+00	0.00E+00	0.00E+00	6.55E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	2.17E-03	0.00E+00	4.66E-02	0.00E+00	0.00E+00	5.12E-01	NA	7.46E-02	0.00E+00	0.00E+00	0.00E+00	6.35E-01	8.00E+00	7.94E-02	8.00E+01	7.94E-03	0.70%	0.54%
Manganese	2.81E-01	0.00E+00	1.73E+00	0.00E+00	0.00E+00	9.58E+00	0.00E+00	4.34E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	8.80E+01	1.81E-01	2.84E+02	5.61E-02	1.59%	3.81%
Mercury (inorganic)	0.00E+00	0.00E+00	1.10E-04	0.00E+00	0.00E+00	1.98E-02	NA	3.72E-03	0.00E+00	0.00E+00	0.00E+00	2.36E-02	1.32E+01	1.79E-03	3.96E+01	5.96E-04	0.02%	0.04%
Mercury (methyl)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	3.20E-02	0.00E+00	1.60E-01	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	0.00E+00	6.33E-07	0.00E+00	0.00E+00	2.57E-04	0.00E+00	5.44E-07	0.00E+00	0.00E+00	0.00E+00	2.58E-04	7.00E-02	3.69E-03	7.00E-01	3.69E-04	0.03%	0.02%
Nickel	0.00E+00	0.00E+00	1.32E-02	0.00E+00	0.00E+00	1.56E+00	0.00E+00	2.19E-02	0.00E+00	0.00E+00	0.00E+00	1.59E+00	4.00E+01	3.98E-02	8.00E+01	1.99E-02	0.35%	1.35%
Nitrate	2.24E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.24E-01	5.07E+02	4.41E-04	1.13E+03	1.98E-04	0.00%	0.01%
Nitrate/Nitrite	1.75E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.75E+01	5.07E+02	3.46E-02	1.13E+03	1.55E-02	0.30%	1.05%
Oxychlordane	0.00E+00	0.00E+00	3.26E-07	0.00E+00	0.00E+00	1.25E-04	0.00E+00	2.15E-07	0.00E+00	0.00E+00	0.00E+00	1.25E-04	4.58E+00	2.73E-05	9.16E+00	1.37E-05	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	0.00E+00	1.64E-06	0.00E+00	0.00E+00	6.22E-04	0.00E+00	1.37E-06	0.00E+00	0.00E+00	0.00E+00	6.25E-04	2.40E-01	2.60E-03	2.40E+00	2.60E-04	0.02%	0.02%
Pentachlorophenol	0.00E+00	0.00E+00	7.84E-04	0.00E+00	0.00E+00	2.91E-01	0.00E+00	1.38E-03	0.00E+00	0.00E+00	0.00E+00	2.93E-01	2.40E-01	1.22E+00	2.40E+00	1.22E-01	10.75%	8.28%
Perchlorate	0.00E+00	0.00E+00	5.19E-04	0.00E+00	0.00E+00	1.48E-02	NA	2.44E-01	0.00E+00	0.00E+00	0.00E+00	2.59E-01	8.50E+00	3.05E-02	2.55E+01	1.02E-02	0.27%	0.69%
Selenium	1.39E-03	0.00E+00	7.65E-04	0.00E+00	0.00E+00	2.25E-02	0.00E+00	8.87E-03	0.00E+00	0.00E+00	0.00E+00	3.36E-02	2.00E-01	1.68E-01	3.30E-01	1.02E-01	1.48%	6.90%
Silver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	0.00E+00	2.65E-02	0.00E+00	0.00E+00	1.84E-01	0.00E+00	2.32E-01	0.00E+00	0.00E+00	0.00E+00	4.42E-01	2.63E+02	1.68E-03	7.89E+02	5.60E-04	0.01%	0.04%
Sulfate	1.73E+01	0.00E+00	4.27E-01	0.00E+00	0.00E+00	1.22E+01	0.00E+00	3.73E+00	0.00E+00	0.00E+00	0.00E+00	3.36E+01	NA	NA	NA	NA	NA	NA
Thallium	2.27E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.27E-04	7.40E-03	3.06E-02	7.40E-02	3.06E-03	0.27%	0.21%
trans-Nonachlor	0.00E+00	0.00E+00	5.63E-07	0.00E+00	0.00E+00	2.22E-04	0.00E+00	5.67E-07	0.00E+00	0.00E+00	0.00E+00	2.23E-04	4.58E+00	4.87E-05	9.16E+00	2.43E-05	0.00%	0.00%
Vanadium	1.85E-02	0.00E+00	2.84E-02	0.00E+00	0.00E+00	6.26E-02	0.00E+00	2.84E-03	0.00E+00	0.00E+00	0.00E+00	1.12E-01	2.10E-01	5.35E-01	2.10E+00	5.35E-02	4.71%	3.63%
Zinc	0.00E+00	0.00E+00	1.09E-01	0.00E+00	0.00E+00	1.51E+01	0.00E+00	2.21E+00	0.00E+00	0.00E+00	0.00E+00	1.74E+01	1.60E+02	1.09E-01	3.20E+02	5.44E-02	0.96%	3.69%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	2.1E-04	1.0E-04	0.00%	0.01%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	7.4E-03	1.5E-03	0.07%	0.10%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.9E-01	1.9E-02	1.67%	1.29%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	1.0E-02	1.1E-03	0.09%	0.07%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Unit
Terrestrial plant diet fraction =	0.5	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0.5	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	4.08E-05	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.00204	kg/d
Body weight =	0.022	kg
Home range =	0.034595	acres
Water intake rate =	0.0066	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-106
Tier 2 COPCs
EEQs and Hazard Indices for the Deer Mouse at LHAAP
Low Impact Sub-Area/Harrison Bayou Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							---Unitless---									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	8.00E-09	mg/L	4.00E-06	mg/kg	3.18E-06	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	2.40E-09	0.00E+00	5.90E-09	0.00E+00	0.00E+00	1.62E-06	0.00E+00	5.72E-10	0.00E+00	0.00E+00	0.00E+00	1.63E-06	1.00E-06	1.63E+00	1.00E-05	1.63E-01	30.41%	21.85%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	8.00E-04	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.48E-06	0.00E+00	0.00E+00	3.32E-04	0.00E+00	1.04E-06	0.00E+00	0.00E+00	0.00E+00	3.35E-04	8.00E-01	4.18E-04	4.00E+00	8.37E-05	0.01%	0.01%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	3.10E-03	mg/kg	1.00E+00		4.75E+00	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	5.75E-06	0.00E+00	0.00E+00	1.29E-03	0.00E+00	1.95E-05	0.00E+00	0.00E+00	0.00E+00	1.32E-03	8.00E-01	1.65E-03	4.00E+00	3.30E-04	0.03%	0.04%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.07E-03	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	1.98E-06	0.00E+00	0.00E+00	4.59E-04	0.00E+00	1.39E-06	0.00E+00	0.00E+00	0.00E+00	4.63E-04	8.00E-01	5.79E-04	4.00E+00	1.16E-04	0.01%	0.02%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.27E-07	0.00E+00	0.00E+00	7.56E-05	0.00E+00	3.97E-08	0.00E+00	0.00E+00	0.00E+00	7.60E-05	2.00E-01	3.80E-04	1.00E+00	7.60E-05	0.01%	0.01%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.15E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	5.84E-07	0.00E+00	0.00E+00	1.33E-04	0.00E+00	1.36E-07	0.00E+00	0.00E+00	0.00E+00	1.34E-04	4.58E+00	2.92E-05	9.16E+00	1.46E-05	0.00%	0.00%
Aluminum	1.12E+01	mg/L	7.50E+03	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	3.37E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.37E+00	1.93E+00	1.74E+00	1.93E+01	1.74E-01	32.47%	23.33%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-01	mg/kg	1.00E+00			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	9.45E-04	0.00E+00	0.00E+00	7.08E-03	0.00E+00	8.74E-04	0.00E+00	0.00E+00	0.00E+00	8.90E-03	1.25E-01	7.12E-02	1.25E+00	7.12E-03	1.33%	0.95%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.55E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.73E-06	0.00E+00	0.00E+00	1.08E-03	0.00E+00	9.92E-07	0.00E+00	0.00E+00	0.00E+00	1.08E-03	6.85E-02	1.58E-02	6.85E-01	1.58E-03	0.29%	0.21%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.21E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.24E-06	0.00E+00	0.00E+00	5.11E-04	0.00E+00	4.70E-07	0.00E+00	0.00E+00	0.00E+00	5.13E-04	6.80E-02	7.55E-03	6.80E-01	7.55E-04	0.14%	0.10%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	3.32E-03	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	6.15E-06	0.00E+00	0.00E+00	1.44E-03	0.00E+00	5.50E-07	0.00E+00	0.00E+00	0.00E+00	1.44E-03	6.80E-02	2.12E-02	6.80E-01	2.12E-03	0.40%	0.28%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	4.07E-03	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	7.55E-06	0.00E+00	0.00E+00	1.86E-03	0.00E+00	1.21E-07	0.00E+00	0.00E+00	0.00E+00	1.86E-03	6.80E-02	2.74E-02	6.80E-01	2.74E-03	0.51%	0.37%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	7.92E-04	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.47E-06	0.00E+00	0.00E+00	2.97E-04	0.00E+00	1.93E-05	0.00E+00	0.00E+00	0.00E+00	3.17E-04	6.80E-02	4.67E-03	6.80E-01	4.67E-04	0.09%	0.06%
Barium	0.00E+00	mg/L	2.32E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E+00	0.00E+00	1.98E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	5.10E-02	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	9.46E-05	0.00E+00	0.00E+00	1.81E-02	0.00E+00	7.60E-03	0.00E+00	0.00E+00	0.00E+00	2.58E-02	4.00E+00	6.45E-03	4.00E+01	6.45E-04	0.12%	0.09%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.33E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	mg/L	1.83E-01	mg/kg	3.02E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	2.87E+01	1.33E+00	1.06E+00	1.06E+00	6.72E-01	6.72E-01	0.00E+00	0.00E+00	5.61E-04	0.00E+00	0.00E+00	4.03E-01	0.00E+00	1.49E-02	0.00E+00	0.00E+00	0.00E+00	4.18E-01	1.00E+00	4.18E-01	1.00E+01	4.18E-02	7.79%	5.60%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.21E-07	0.00E+00	0.00E+00	7.29E-05	0.00E+00	7.48E-08	0.00E+00	0.00E+00	0.00E+00	7.33E-05	4.58E+00	1.60E-05	9.16E+00	8.00E-06	0.00%	0.00%
Chromium	9.95E-03	mg/L	0.00E+00	mg/kg	1.10E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	2.98E-03	0.00E+00	2.04E-02	0.00E+00	0.00E+00	1.56E-01	0.00E+00	2.10E-02	0.00E+00	0.00E+00	0.00E+00	2.01E-01	3.28E+00	6.12E-02	1.31E+01	1.53E-02	1.14%	2.04%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.93E-07	0.00E+00	0.00E+00	8.93E-05	0.00E+00	9.17E-08	0.00E+00	0.00E+00	0.00E+00	8.98E-05	4.58E+00	1.96E-05	9.16E+00	9.81E-06	0.00%	0.00%
Copper	1.19E-02	mg/L	6.82E+00	mg/kg	6.53E+00	mg/kg	1.00E+00	1.11E+03	1.56E+00	1.45E+00	6.06E-01	6.22E-01	6.22E-01	8.97E-02	8.97E-02	3.56E-03	0.00E+00	1.21E-02	0.00E+00	0.00E+00	4.40E-01	0.00E+00	1.88E-01	0.00E+00	0.00E+00	0.00E+00	6.44E-01	1.17E+01	5.50E-02	1.51E+01	4.25E-02	1.02%	5.69%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.72E-04	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.19E-07	0.00E+00	0.00E+00	7.02E-05	0.00E+00	1.91E-07	0.00E+00	0.00E+00	0.00E+00	7.07E-05	2.00E-02	3.53E-03	2.00E-01	3.53E-04	0.07%	0.05%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	4.41E-07	0.00E+00	0.00E+00	9.71E-05	0.00E+00	3.02E-07	0.00E+00	0.00E+00	0.00E+00	9.78E-05	9.20E-02	1.06E-03	9.20E-01	1.06E-04	0.02%	0.01%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.93E-04	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.58E-07	0.00E+00	0.00E+00	8.01E-05	0.00E+00	1.42E-07	0.00E+00	0.00E+00	0.00E+00	8.06E-05	8.00E-02	1.01E-03	2.90E-01	2.78E-04	0.02%	0.04%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	1.61E+01	mg/L	0.00E+00	mg/kg	9.10E+03	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	4.84E+00	0.00E+00	1.69E+01	0.00E+00	0.00E+00	1.52E+01	0.00E+00	1.69E+00	0.00E+00	0.00E+00	0.00E+00	3.86E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	5.66E-03	mg/L	0.00E+00	mg/kg	2.21E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	4.50E-01	NA	6.78E-02	6.78E-02	1.16E-02	1.16E-02	1.70E-03	0.00E+00	4.09E-02	0.00E+00	0.00E+00	4.61E-01	NA	6.94E-02	0.00E+00	0.00E+00	0.00E+00	5.73E-01	8.00E+00	7.16E-02	8.00E+01	7.16E-03	1.33%	0.96%
Manganese	6.92E-01	mg/L	0.00E+00	mg/kg	8.30E+02	mg/kg	1.00E+00	2.50E+02	4.20E-01	2.26E-01	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	2.07E-01	0.00E+00	1.54E+00	0.00E+00	0.00E+00	8.70E+00	0.00E+00	3.04E+00	0.00E+00	0.00E+00	0.00E+00	1.35E+01	8.80E+01	1.53E-01	2.84E+02	4.75E-02	2.85%	6.35%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-02	mg/kg	1.00E+00		1.14E+00	7.64E+00	NA	1.41E+00	1.41E+00	9.15E-02	9.15E-02	0.00E+00	0.00E+00	1.00E-04	0.00E+00	0.00E+00	1.91E-02	NA	3.53E-03	0.00E+00	0.00E+00	0.00E+00	2.28E-02	1.32E+01	1.72E-03	3.96E+01	5.75E-04	0.03%	0.08%
Mercury (methyl)	0.00E+00	mg/L	6.13E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	1.33E+00	NA	NA			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	3.20E-02	0.00E+00	1.60E-01	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.88E-04	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	5.35E-07	0.00E+00	0.00E+00	1.25E-04	0.00E+00	4.60E-08	0.00E+00	0.00E+00	0.00E+00	1.26E-04	7.00E-02	1.80E-03	7.00E-01	1.80E-04	0.03%	0.02%
Nickel	0.00E+00	mg/L	9.70E+00	mg/kg	6.36E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	6.15E-02	6.84E-02	6.84E-02	8.71E-02	8.71E-02	0.00E+00	0.00E+00	1.18E-02	0.00E+00	0.00E+00	3.12E-01	0.00E+00	2.02E-02	0.00E+00	0.00E+00	0.00E+00	3.44E-01	4.00E+01	8.60E-03	8.00E+01	4.30E-03	0.16%	0.58%
Nitrate	4.32E-01	mg/L	4.60E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	1.30E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E-01	5.07E+02	2.55E-04	1.13E+03	1.15E-04	0.00%	0.02%
Nitrate/Nitrite	2.93E+01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02								8.79E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.79E+00	5.07E+02	1.73E-02	1.13E+03	7.77E-03	0.32%	1.04%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E-04	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.16E-07	0.00E+00	0.00E+00	6.97E-05	0.00E+00	2.08E-07	0.00E+00	0.00E+00	0.00E+00	7.02E-05	4.58E+00	1.53E-05	9.16E+00	7.67E-06	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.62E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.04E-06	0.00E+00	0.00E+00	2.28E-04	0.00E+00	7.14E-07	0.00E+00	0.00E+00	0.00E+00	2.30E-04	2.40E-01	9.57E-04	2.40E+00	9.57E-05	0.02%	0.01%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-01	mg/kg	1.00E+00			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.59E-04	0.00E+00	0.00E+00	9.83E-02	0.00E+00	4.88E-04	0.00E+00	0.00E+00	0.00E+00	9.92E-02	2.40E-01	4.13E-01	2.40E+00	4.13E-02	7.70%	5.53%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	7.70E-02	mg/kg	1.00E+00			3.00E-01	NA	3.19E+01	3.19E+01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	1.43E-04	0.00E+00	0.00E+00	1.07E-03	NA	1.14E-01	0.00E+00	0.00E+00	0.00E+00	1.15E-01	8.50E+00	1.36E-02	2.55E+01	4.52E-03	0.25%	0.60%
Selenium	3.90E-03	mg/L	7.65E-01	mg/kg	3.74E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.21E+00	4.93E-01	4.59E-01	4.59E-01	1.51E-01	1.51E-01	1.17E-03	0.00E+00	6.93E-04	0.00E+00	0.00E+00	2.10E-02	0.00E+00	7.95E-03	0.00E+00	0.00E+00	0.00E+00	3.08E-02	2.00E-01	1.54E-01	3.30E-01	9.33E-02	2.86%	12.47%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.30E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	2.41E-02	0.00E+00	0.00E+00	5.24E-02	0.00E+00	1.26E-01	0.00E+00	0.00E+00	0.00E+00	2.03E-01	2.63E+02	7.72E-04	7.89E+02	2.57E-04	0.01%	0.03%
Sulfate	4.15E+01	mg/L	5.13E+01	mg/kg	1.30E+02	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	1.24E+01	0.00E+00	2.41E-01	0.00E+00	0.00E+00	1.81E+00	0.00E+00	1.27E+00	0.00E+00	0.00E+00	0.00E+00	1.58E+01	NA	NA	NA	NA	NA	NA
Thallium	5.86E-04	mg/L	4.92E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00							1.76E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.76E-04	7.40E-03	2.38E-02	7.40E-02	2.38E-03	0.44%	0.32%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.69E-07	0.00E+00	0.00E+00	1.06E-04	0.00E+00	1.09E-07	0.00E+00	0.00E+00	0.00E+00	1.07E-04	4.58E+00	2.34E-05	9.16E+00	1.17E-05	0.00%	0.00%
Vanadium	4.29E-02	mg/L	0.00E+00	mg/kg	1.45E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	1.29E-02	0.00E+00	2.68E-02	0.00E+00	0.00E+00	2.82E-02	0.00E+00	2.42E-03	0.00E+00	0.00E+00	0.00E+00	7.03E-02	2.10E-01	3.35E-01	2.10E+00	3.35E-02	6.23%	4.48%
Zinc	0.00E+00	mg/L	3.15E+01	mg/kg	4.79E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	6.34E+00	1.06E+00	8.84E-01	8.84E-01	1.84E-01	1.84E-01	0.00E+00	0.00E+00	8.89E-02	0.00E+00	0.00E+00	1.41E+01	0.00E+00	1.97E+00	0.00E+00	0.00E+00	0.00E+00	1.62E+01	1.60E+02	1.01E-01	3.20E+02	5.05E-02	1.88%	6.75%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.0E-04	5.2E-05	0.00%	0.01%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	2.6E-03	5.3E-04	0.05%	0.07%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	7.7E-02	7.7E-03	1.43%	1.03%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	5.0E-03	5.4E-04	0.09%	0.07%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\,x\,Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0.5	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0.5	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.0000408	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.00204	kg/d
Body weight =	0.022	kg
Home range =	0.1457916	acres
Water intake rate =	0.0066	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-107
Tier 1 COPCs
EEQs and Hazard Indices for the Raccoon at LHAAP
Low Impact Sub-Area/Harrison Bayou Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							Unitless	Unitless	Unitless	Unitless	Unitless	Unitless	Unitless	Unitless	Unitless	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	9.44E-09	mg/L	1.41E-05	mg/kg	3.95E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	7.77E-10	3.33E-08	9.31E-09	4.02E-06	2.33E-06	6.60E-07	0.00E+00	5.40E-10	0.00E+00	6.03E-10	0.00E+00	7.06E-06	1.00E-06	7.06E+00	1.00E-05	7.06E-01	3.32%	3.21%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.40E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.30E-06	0.00E+00	0.00E+00	1.64E-04	0.00E+00	3.37E-06	0.00E+00	4.05E-06	0.00E+00	1.74E-04	8.00E-01	2.18E-04	4.00E+00	4.36E-05	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	4.30E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	1.01E-05	0.00E+00	0.00E+00	5.05E-04	0.00E+00	8.03E-05	0.00E+00	1.07E-05	0.00E+00	6.06E-04	8.00E-01	7.58E-04	4.00E+00	1.52E-04	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.23E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	0.00E+00	5.26E-06	0.00E+00	0.00E+00	2.70E-04	0.00E+00	5.37E-06	0.00E+00	9.30E-06	0.00E+00	2.90E-04	8.00E-01	3.62E-04	4.00E+00	7.25E-05	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.87E-04	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.41E-07	0.00E+00	0.00E+00	2.26E-05	0.00E+00	3.82E-08	0.00E+00	5.41E-07	0.00E+00	2.36E-05	2.00E-01	1.18E-04	1.00E+00	2.36E-05	0.00%	0.00%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.76E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	8.87E-07	0.00E+00	0.00E+00	4.46E-05	0.00E+00	4.57E-07	0.00E+00	1.09E-06	0.00E+00	4.71E-05	4.58E+00	1.03E-05	9.16E+00	5.14E-06	0.00%	0.00%
Aluminum	2.03E+01	mg/L	1.03E+04	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	1.67E+00	2.42E+01	0.00E+00	2.19E-01	3.48E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.74E+02	1.93E+00	1.94E+02	1.93E+01	1.94E+01	91.20%	88.13%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	6.37E-01	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	1.50E-03	0.00E+00	0.00E+00	5.46E-03	0.00E+00	1.34E-03	0.00E+00	2.66E-04	0.00E+00	8.57E-03	1.25E-01	6.86E-02	1.25E+00	6.86E-03	0.03%	0.03%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.07E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	7.24E-06	0.00E+00	0.00E+00	3.65E-04	0.00E+00	1.51E-05	0.00E+00	8.87E-06	0.00E+00	3.96E-04	6.85E-02	5.79E-03	6.85E-01	5.79E-04	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.42E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.35E-06	0.00E+00	0.00E+00	1.69E-04	0.00E+00	4.32E-07	0.00E+00	4.10E-06	0.00E+00	1.77E-04	6.80E-02	2.60E-03	6.90E-01	2.56E-04	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.11E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	0.00E+00	9.69E-06	0.00E+00	0.00E+00	5.01E-04	0.00E+00	1.09E-06	0.00E+00	1.09E-05	0.00E+00	5.23E-04	6.80E-02	7.69E-03	6.90E-01	7.58E-04	0.00%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	7.47E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	1.76E-05	0.00E+00	0.00E+00	9.59E-04	0.00E+00	1.02E-06	0.00E+00	3.60E-05	0.00E+00	1.01E-03	6.80E-02	1.49E-02	6.90E-01	1.47E-03	0.01%	0.01%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.50E-04	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.01E-06	0.00E+00	0.00E+00	8.96E-05	0.00E+00	1.35E-05	0.00E+00	2.46E-06	0.00E+00	1.08E-04	6.80E-02	1.58E-03	6.90E-01	1.56E-04	0.00%	0.00%
Barium	0.00E+00	mg/L	2.86E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	6.76E-01	0.00E+00	0.00E+00	9.70E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.04E+01	5.10E+00	2.03E+00	1.98E+01	5.24E-01	0.96%	2.38%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	6.80E-02	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.60E-04	0.00E+00	0.00E+00	6.79E-03	0.00E+00	6.58E-03	0.00E+00	1.97E-04	0.00E+00	1.37E-02	4.00E+00	3.43E-03	4.00E+01	3.43E-04	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.82E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	0.00E+00	6.64E-04	0.00E+00	0.00E+00	4.64E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.71E-02	1.83E+01	2.57E-03	1.83E+02	2.57E-04	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	mg/L	1.83E-01	mg/kg	3.84E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.58E+01	1.33E+00	9.52E-01	9.52E-01	9.22E-01	9.22E-01	0.00E+00	4.32E-04	9.05E-04	0.00E+00	1.10E-02	7.46E-02	0.00E+00	1.10E-02	0.00E+00	8.88E-04	0.00E+00	9.88E-02	1.00E+00	9.88E-02	1.00E+01	9.88E-03	0.05%	0.04%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.88E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.42E-07	0.00E+00	0.00E+00	2.22E-05	0.00E+00	2.28E-07	0.00E+00	5.42E-07	0.00E+00	2.35E-05	4.58E+00	5.12E-06	9.16E+00	2.56E-06	0.00%	0.00%
Chromium	1.27E-02	mg/L	0.00E+00	mg/kg	1.22E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	1.04E-03	0.00E+00	2.89E-02	3.18E-02	0.00E+00	2.91E-01	0.00E+00	1.77E-01	0.00E+00	1.02E-02	0.00E+00	5.40E-01	3.28E+00	1.65E-01	1.31E+01	4.11E-02	0.08%	0.19%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	5.84E-07	0.00E+00	0.00E+00	2.94E-05	0.00E+00	3.01E-07	0.00E+00	7.16E-07	0.00E+00	3.10E-05	4.58E+00	6.76E-06	9.16E+00	3.38E-06	0.00%	0.00%
Copper	1.69E-02	mg/L	7.78E+00	mg/kg	7.43E+00	mg/kg	1.00E+00	5.92E+03	5.25E+00	1.32E+00	5.59E-01	5.75E-01	5.75E-01	1.49E-01	1.49E-01	1.39E-03	1.83E-02	1.75E-02	2.51E-01	3.07E-01	7.37E-02	0.00E+00	1.29E-01	0.00E+00	2.79E-03	0.00E+00	8.00E-01	1.17E+01	6.84E-02	1.51E+01	5.29E-02	0.03%	0.24%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.86E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.38E-07	0.00E+00	0.00E+00	2.13E-05	0.00E+00	9.16E-06	0.00E+00	5.37E-07	0.00E+00	3.15E-05	2.00E-02	1.57E-03	2.00E-01	1.57E-04	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.75E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	6.49E-07	0.00E+00	0.00E+00	3.16E-05	0.00E+00	3.17E-07	0.00E+00	8.40E-07	0.00E+00	3.34E-05	9.20E-02	3.64E-04	9.20E-01	3.64E-05	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.20E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	5.20E-07	0.00E+00	0.00E+00	2.57E-05	0.00E+00	1.25E-07	0.00E+00	6.37E-07	0.00E+00	2.70E-05	8.00E-02	3.38E-04	2.90E-01	9.32E-05	0.00%	0.00%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	2.91E+01	mg/L	0.00E+00	mg/kg	1.00E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	2.40E+00	0.00E+00	2.37E+01	7.30E+01	0.00E+00	5.89E+00	0.00E+00	1.21E+00	0.00E+00	5.21E-02	0.00E+00	1.06E+02	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	7.24E-03	mg/L	0.00E+00	mg/kg	2.51E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	4.39E-01	NA	6.40E-02	6.40E-02	1.33E-02	1.33E-02	5.96E-04	0.00E+00	5.93E-02	2.73E-02	0.00E+00	8.31E-02	NA	4.84E-02	0.00E+00	8.39E-04	0.00E+00	2.19E-01	8.00E+00	2.74E-02	8.00E+01	2.74E-03	0.01%	0.01%
Manganese	9.37E-01	mg/L	0.00E+00	mg/kg	9.35E+02	mg/kg	1.00E+00	2.00E+03	2.10E+00	2.21E-01	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	7.72E-02	0.00E+00	2.21E+00	4.70E+00	0.00E+00	1.56E+00	0.00E+00	2.82E+00	0.00E+00	2.25E-02	0.00E+00	1.14E+01	8.80E+01	1.29E-01	2.84E+02	4.01E-02	0.06%	0.18%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.95E-02	mg/kg	1.00E+00		2.87E+00	7.16E+00	NA	1.35E+00	1.35E+00	1.03E-01	1.03E-01	0.00E+00	0.00E+00	1.40E-04	0.00E+00	0.00E+00	3.21E-03	NA	2.41E-03	0.00E+00	1.54E-05	0.00E+00	5.78E-03	1.00E+00	5.78E-03	3.00E+00	1.93E-03	0.00%	0.01%
Mercury (methyl)	0.00E+00	mg/L	8.29E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.16E+00	NA	NA			0.00E+00	1.95E-04	0.00E+00	0.00E+00	1.79E-03	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	1.98E-03	1.50E-02	1.32E-01	2.50E-02	7.94E-02	0.06%	0.36%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.41E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	8.05E-07	0.00E+00	0.00E+00	4.17E-05	0.00E+00	3.53E-07	0.00E+00	9.87E-07	0.00E+00	4.38E-05	7.00E-02	6.26E-04	7.00E-01	6.26E-05	0.00%	0.00%
Nickel	0.00E+00	mg/L	1.10E+01	mg/kg	7.10E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	5.96E-02	6.65E-02	6.65E-02	1.01E-01	1.01E-01	0.00E+00	2.59E-02	1.68E-02	0.00E+00	1.92E-01	2.53E-01	0.00E+00	1.42E-02	0.00E+00	1.80E-03	0.00E+00	5.04E-01	4.00E+01	1.26E-02	8.00E+01	6.29E-03	0.01%	0.03%
Nitrate	7.46E-01	mg/L	7.48E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	6.14E-02	1.76E-03	0.00E+00	2.00E+00	1.18E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.07E+00	5.07E+02	4.09E-03	1.13E+03	1.83E-03	0.00%	0.01%
Nitrate/Nitrite	5.84E+01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03								4.81E+00	0.00E+00	0.00E+00	1.57E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.61E+02	5.07E+02	3.18E-01	1.13E+03	1.43E-01	0.15%	0.65%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.15E-07	0.00E+00	0.00E+00	2.02E-05	0.00E+00	1.39E-07	0.00E+00	5.08E-07	0.00E+00	2.13E-05	4.58E+00	4.65E-06	9.16E+00	2.32E-06	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	8.83E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.08E-06	0.00E+00	0.00E+00	1.01E-04	0.00E+00	8.90E-07	0.00E+00	2.55E-06	0.00E+00	1.06E-04	2.40E-01	4.43E-04	2.40E+00	4.43E-05	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	4.23E-01	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	9.97E-04	0.00E+00	0.00E+00	4.72E-02	0.00E+00	8.97E-04	0.00E+00	1.22E-03	0.00E+00	5.04E-02	2.40E-01	2.10E-01	2.40E+00	2.10E-02	0.10%	0.10%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.80E-01	mg/kg	1.00E+00			1.14E+00	NA	1.88E+01	1.88E+01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	6.60E-04	0.00E+00	0.00E+00	2.40E-03	NA	1.58E-01	0.00E+00	1.17E-04	0.00E+00	1.62E-01	8.50E+00	1.90E-02	2.55E+01	6.33E-03	0.01%	0.03%
Selenium	4.63E-03	mg/L	9.08E-01	mg/kg	4.13E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.18E+00	5.02E-01	4.64E-01	4.64E-01	1.95E-01	1.95E-01	3.81E-04	2.14E-03	9.73E-04	2.38E-03	3.07E-02	3.66E-03	0.00E+00	5.76E-03	0.00E+00	2.02E-04	0.00E+00	4.62E-02	2.00E-01	2.31E-01	3.30E-01	1.40E-01	0.11%	0.64%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	3.37E-02	0.00E+00	0.00E+00	2.99E-02	0.00E+00	1.50E-01	0.00E+00	5.95E-03	0.00E+00	2.20E-01	2.63E+02	8.36E-04	7.89E+02	2.79E-04	0.00%	0.00%
Sulfate	5.76E+01	mg/L	7.51E+01	mg/kg	2.30E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	4.74E+00	1.77E-01	5.42E-01	1.54E+02	1.19E+00	1.97E-01	0.00E+00	2.42E-01	0.00E+00	9.59E-02	0.00E+00	1.65E+02	NA	NA	NA	NA	NA	NA
Thallium	7.55E-04	mg/L	6.00E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00							6.22E-05	1.41E-03	0.00E+00	3.01E-02	2.03E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.19E-02	7.40E-03	7.01E+00	7.40E-02	7.01E-01	3.30%	3.19%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.04E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	7.16E-07	0.00E+00	0.00E+00	3.60E-05	0.00E+00	3.68E-07	0.00E+00	8.77E-07	0.00E+00	3.80E-05	4.58E+00	8.29E-06	9.16E+00	4.14E-06	0.00%	0.00%
Vanadium	6.18E-02	mg/L	0.00E+00	mg/kg	1.53E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	5.09E-03	0.00E+00	3.62E-02	1.66E-01	0.00E+00	1.02E-02	0.00E+00	1.85E-03	0.00E+00	2.28E-04	0.00E+00	2.19E-01	2.10E-01	1.04E+00	2.10E+00	1.04E-01	0.49%	0.47%
Zinc	0.00E+00	mg/L	3.58E+01	mg/kg	5.89E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.53E+00	1.01E+00	8.08E-01	8.08E-01	4.51E-01	4.51E-01	0.00E+00	8.44E-02	1.39E-01	0.00E+00	2.03E+00	2.45E+00	0.00E+00	1.43E+00	0.00E+00	6.66E-02	0.00E+00	6.20E+00	1.60E+02	3.87E-02	3.20E+02	1.94E-02	0.02%	0.09%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	3.5E-05	1.8E-05	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	1.3E-03	2.7E-04	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	3.3E-02	3.2E-03	0.02%	0.01%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	2.6E-03	2.6E-04	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	2.1E-03	2.2E-04	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\,x\,Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0.6	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.05	unitless
Aq. Invert diet fraction =	0.15	unitless
Terr. Invert diet fraction =	0.15	unitless
Mammal diet fraction =	0.05	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.01363	kg/d
Sediment ingestion rate =	0.01363	kg/d
Food ingestion rate =	0.29	kg/d
Body weight =	5.78	kg
Home range =	13.09653	acres
Water intake rate =	0.476	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-108
Tier 2 COPCs
EEQs and Hazard Indices for the Raccoon at LHAAP
Low Impact Sub-Area/Harrison Bayou Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
									---Unitless---							mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	8.00E-09	mg/L	4.00E-06	mg/kg	3.18E-06	mg/kg	#######	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	6.59E-10	9.43E-09	7.51E-09	4.63E-07	1.41E-07	2.64E-07	0.00E+00	3.71E-10	0.00E+00	3.77E-10	0.00E+00	8.86E-07	1.00E-06	8.86E-01	1.00E-05	8.86E-02	0.60%	0.58%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	8.00E-04	mg/kg	#######		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.89E-06	0.00E+00	0.00E+00	5.39E-05	0.00E+00	6.75E-07	0.00E+00	1.76E-06	0.00E+00	5.82E-05	8.00E-01	7.28E-05	4.00E+00	1.46E-05	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	3.10E-03	mg/kg	#######		4.75E+00	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	7.31E-06	0.00E+00	0.00E+00	2.10E-04	0.00E+00	1.27E-05	0.00E+00	7.33E-06	0.00E+00	2.37E-04	8.00E-01	2.97E-04	4.00E+00	5.93E-05	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.07E-03	mg/kg	#######		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	2.52E-06	0.00E+00	0.00E+00	7.46E-05	0.00E+00	9.00E-07	0.00E+00	2.38E-06	0.00E+00	8.04E-05	8.00E-01	1.00E-04	4.00E+00	2.01E-05	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	#######			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.15E-07	0.00E+00	0.00E+00	1.23E-05	0.00E+00	2.58E-08	0.00E+00	3.87E-07	0.00E+00	1.31E-05	2.00E-01	6.55E-05	1.00E+00	1.31E-05	0.00%	0.00%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.15E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	7.43E-07	0.00E+00	0.00E+00	2.16E-05	0.00E+00	8.85E-08	0.00E+00	6.93E-07	0.00E+00	2.31E-05	4.58E+00	5.04E-06	9.16E+00	2.52E-06	0.00%	0.00%
Aluminum	1.12E+01	mg/L	7.50E+03	mg/kg	0.00E+00	mg/kg	#######	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	9.24E-01	1.77E+01	0.00E+00	1.21E-01	2.54E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.73E+02	1.93E+00	1.41E+02	1.93E+01	1.41E+01	95.93%	93.08%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-01	mg/kg	#######			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	1.20E-03	0.00E+00	0.00E+00	1.15E-03	0.00E+00	5.67E-04	0.00E+00	1.42E-04	0.00E+00	3.06E-03	1.25E-01	2.45E-02	1.25E+00	2.45E-03	0.02%	0.02%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.55E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	6.02E-06	0.00E+00	0.00E+00	1.75E-04	0.00E+00	6.44E-07	0.00E+00	5.61E-06	0.00E+00	1.87E-04	6.85E-02	2.73E-03	6.85E-01	2.73E-04	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.21E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.85E-06	0.00E+00	0.00E+00	8.29E-05	0.00E+00	3.05E-07	0.00E+00	2.66E-06	0.00E+00	8.87E-05	6.80E-02	1.30E-03	6.90E-01	1.29E-04	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	3.32E-03	mg/kg	#######		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	7.82E-06	0.00E+00	0.00E+00	2.33E-04	0.00E+00	3.57E-07	0.00E+00	4.14E-06	0.00E+00	2.46E-04	6.80E-02	3.61E-03	6.90E-01	3.56E-04	0.00%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	4.07E-03	mg/kg	#######			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	9.60E-06	0.00E+00	0.00E+00	3.01E-04	0.00E+00	7.88E-08	0.00E+00	1.71E-05	0.00E+00	3.28E-04	6.80E-02	4.82E-03	6.90E-01	4.75E-04	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	7.92E-04	mg/kg	#######			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.87E-06	0.00E+00	0.00E+00	4.81E-05	0.00E+00	1.26E-05	0.00E+00	1.74E-06	0.00E+00	6.43E-05	6.80E-02	9.46E-04	6.90E-01	9.32E-05	0.00%	0.00%
Barium	0.00E+00	mg/L	2.32E+02	mg/kg	0.00E+00	mg/kg	#######	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	5.46E-01	0.00E+00	0.00E+00	7.84E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.39E+00	5.10E+00	1.64E+00	1.98E+01	4.24E-01	1.12%	2.79%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	5.10E-02	mg/kg	#######			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.20E-04	0.00E+00	0.00E+00	2.94E-03	0.00E+00	4.94E-03	0.00E+00	1.12E-04	0.00E+00	8.10E-03	4.00E+00	2.03E-03	4.00E+01	2.03E-04	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.33E-01	mg/kg	0.00E+00	mg/kg	#######	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	0.00E+00	5.49E-04	0.00E+00	0.00E+00	8.18E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.73E-03	1.83E+01	4.76E-04	1.83E+02	4.77E-05	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	mg/L	1.83E-01	mg/kg	3.02E-01	mg/kg	#######	1.15E+03	6.00E-01	2.87E+01	1.33E+00	1.06E+00	1.06E+00	6.72E-01	6.72E-01	0.00E+00	4.32E-04	7.13E-04	0.00E+00	8.26E-04	6.54E-02	0.00E+00	9.65E-03	0.00E+00	5.10E-04	0.00E+00	7.75E-02	1.00E+00	7.75E-02	1.00E+01	7.75E-03	0.05%	0.05%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.08E-07	0.00E+00	0.00E+00	1.18E-05	0.00E+00	4.86E-08	0.00E+00	3.80E-07	0.00E+00	1.27E-05	4.58E+00	2.77E-06	9.16E+00	1.38E-06	0.00%	0.00%
Chromium	9.95E-03	mg/L	0.00E+00	mg/kg	1.10E+01	mg/kg	#######	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	8.19E-04	0.00E+00	2.60E-02	8.99E-03	0.00E+00	2.54E-02	0.00E+00	1.36E-02	0.00E+00	2.34E-03	0.00E+00	7.71E-02	3.28E+00	2.35E-02	1.31E+01	5.87E-03	0.02%	0.04%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	5.00E-07	0.00E+00	0.00E+00	1.45E-05	0.00E+00	5.95E-08	0.00E+00	4.66E-07	0.00E+00	1.55E-05	4.58E+00	3.39E-06	9.16E+00	1.70E-06	0.00%	0.00%
Copper	1.19E-02	mg/L	6.82E+00	mg/kg	6.53E+00	mg/kg	#######	1.11E+03	1.56E+00	1.45E+00	6.06E-01	6.22E-01	6.22E-01	8.97E-02	8.97E-02	9.78E-04	1.61E-02	1.54E-02	3.31E-02	8.00E-02	7.14E-02	0.00E+00	1.22E-01	0.00E+00	1.47E-03	0.00E+00	3.41E-01	1.17E+01	2.91E-02	1.51E+01	2.25E-02	0.02%	0.15%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.72E-04	mg/kg	#######		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.05E-07	0.00E+00	0.00E+00	1.14E-05	0.00E+00	1.24E-07	0.00E+00	3.78E-07	0.00E+00	1.23E-05	2.00E-02	6.15E-04	2.00E-01	6.15E-05	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-04	mg/kg	#######			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	5.61E-07	0.00E+00	0.00E+00	1.58E-05	0.00E+00	1.96E-07	0.00E+00	7.24E-07	0.00E+00	1.72E-05	9.20E-02	1.87E-04	9.20E-01	1.87E-05	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.93E-04	mg/kg	#######			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.55E-07	0.00E+00	0.00E+00	1.30E-05	0.00E+00	9.23E-08	0.00E+00	4.24E-07	0.00E+00	1.40E-05	8.00E-02	1.75E-04	2.90E-01	4.82E-05	0.00%	0.00%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	1.61E+01	mg/L	0.00E+00	mg/kg	9.10E+03	mg/kg	#######	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	1.33E+00	0.00E+00	2.15E+01	1.01E+01	0.00E+00	2.47E+00	0.00E+00	1.10E+00	0.00E+00	4.01E-02	0.00E+00	3.65E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	5.66E-03	mg/L	0.00E+00	mg/kg	2.21E+01	mg/kg	#######	4.48E+02	7.10E-02	4.50E-01	NA	6.78E-02	6.78E-02	1.16E-02	1.16E-02	4.66E-04	0.00E+00	5.21E-02	6.36E-03	0.00E+00	7.48E-02	NA	4.50E-02	0.00E+00	6.45E-04	0.00E+00	1.79E-01	8.00E+00	2.24E-02	8.00E+01	2.24E-03	0.02%	0.01%
Manganese	6.92E-01	mg/L	0.00E+00	mg/kg	8.30E+02	mg/kg	#######	2.50E+02	4.20E-01	2.26E-01	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	5.70E-02	0.00E+00	1.96E+00	4.34E-01	0.00E+00	1.41E+00	0.00E+00	1.97E+00	0.00E+00	1.58E-02	0.00E+00	5.85E+00	8.80E+01	6.64E-02	2.84E+02	2.06E-02	0.05%	0.14%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-02	mg/kg	#######		1.14E+00	7.64E+00	NA	1.41E+00	1.41E+00	9.15E-02	9.15E-02	0.00E+00	0.00E+00	1.27E-04	0.00E+00	0.00E+00	3.11E-03	NA	2.29E-03	0.00E+00	1.24E-05	0.00E+00	5.54E-03	1.00E+00	5.54E-03	3.00E+00	1.85E-03	0.00%	0.01%
Mercury (methyl)	0.00E+00	mg/L	6.13E-02	mg/kg	0.00E+00	mg/kg	#######		1.14E+00	NA	1.33E+00	NA	NA			0.00E+00	1.44E-04	0.00E+00	0.00E+00	5.24E-04	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	6.68E-04	1.50E-02	4.45E-02	2.50E-02	2.67E-02	0.03%	0.18%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.88E-04	mg/kg	#######			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	6.80E-07	0.00E+00	0.00E+00	2.03E-05	0.00E+00	2.99E-08	0.00E+00	6.34E-07	0.00E+00	2.17E-05	7.00E-02	3.09E-04	7.00E-01	3.09E-05	0.00%	0.00%
Nickel	0.00E+00	mg/L	9.70E+00	mg/kg	6.36E+00	mg/kg	#######		4.86E-01	1.06E+00	6.15E-02	6.84E-02	6.84E-02	8.71E-02	8.71E-02	0.00E+00	2.29E-02	1.50E-02	0.00E+00	3.55E-02	5.07E-02	0.00E+00	1.31E-02	0.00E+00	1.39E-03	0.00E+00	1.39E-01	4.00E+01	3.46E-03	8.00E+01	1.73E-03	0.00%	0.01%
Nitrate	4.32E-01	mg/L	4.60E-01	mg/kg	0.00E+00	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	3.55E-02	1.08E-03	0.00E+00	3.26E-01	1.45E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.64E-01	5.07E+02	7.18E-04	1.13E+03	3.22E-04	0.00%	0.00%
Nitrate/Nitrite	2.93E+01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	3.01E+02								2.41E+00	0.00E+00	0.00E+00	2.21E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.45E+01	5.07E+02	4.83E-02	1.13E+03	2.17E-02	0.03%	0.14%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E-04	mg/kg	#######			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.02E-07	0.00E+00	0.00E+00	1.13E-05	0.00E+00	1.35E-07	0.00E+00	3.75E-07	0.00E+00	1.22E-05	4.58E+00	2.67E-06	9.16E+00	1.34E-06	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.62E-04	mg/kg	#######			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.32E-06	0.00E+00	0.00E+00	3.70E-05	0.00E+00	4.64E-07	0.00E+00	1.24E-06	0.00E+00	4.00E-05	2.40E-01	1.67E-04	2.40E+00	1.67E-05	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-01	mg/kg	#######			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	5.84E-04	0.00E+00	0.00E+00	1.60E-02	0.00E+00	3.17E-04	0.00E+00	5.44E-04	0.00E+00	1.74E-02	2.40E-01	7.25E-02	2.40E+00	7.25E-03	0.05%	0.05%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	7.70E-02	mg/kg	#######			3.00E-01	NA	3.19E+01	3.19E+01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	1.82E-04	0.00E+00	0.00E+00	1.74E-04	NA	7.40E-02	0.00E+00	2.14E-05	0.00E+00	7.44E-02	8.50E+00	8.75E-03	2.55E+01	2.92E-03	0.01%	0.02%
Selenium	3.90E-03	mg/L	7.65E-01	mg/kg	3.74E-01	mg/kg	#######	2.05E+02	4.50E+00	1.21E+00	4.93E-01	4.59E-01	4.59E-01	1.51E-01	1.51E-01	3.22E-04	1.80E-03	8.81E-04	2.01E-03	2.59E-02	3.40E-03	0.00E+00	5.16E-03	0.00E+00	1.42E-04	0.00E+00	3.96E-02	2.00E-01	1.98E-01	3.30E-01	1.20E-01	0.13%	0.79%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.30E+01	mg/kg	#######		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	3.06E-02	0.00E+00	0.00E+00	8.50E-03	0.00E+00	8.21E-02	0.00E+00	3.61E-03	0.00E+00	1.25E-01	2.63E+02	4.75E-04	7.89E+02	1.58E-04	0.00%	0.00%
Sulfate	4.15E+01	mg/L	5.13E+01	mg/kg	1.30E+02	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	3.42E+00	1.21E-01	3.07E-01	3.13E+01	1.62E-01	2.94E-01	0.00E+00	8.22E-01	0.00E+00	3.61E-02	0.00E+00	3.65E+01	NA	NA	NA	NA	NA	NA
Thallium	5.86E-04	mg/L	4.92E-01	mg/kg	0.00E+00	mg/kg	#######	7.50E+01	4.50E+00							4.83E-05	1.16E-03	0.00E+00	1.10E-04	1.67E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-02	7.40E-03	2.43E+00	7.40E-02	2.43E-01	1.65%	1.60%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	5.96E-07	0.00E+00	0.00E+00	1.73E-05	0.00E+00	7.09E-08	0.00E+00	5.55E-07	0.00E+00	1.85E-05	4.58E+00	4.04E-06	9.16E+00	2.02E-06	0.00%	0.00%
Vanadium	4.29E-02	mg/L	0.00E+00	mg/kg	1.45E+01	mg/kg	#######	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	3.53E-03	0.00E+00	3.41E-02	3.23E-02	0.00E+00	4.57E-03	0.00E+00	1.57E-03	0.00E+00	1.99E-04	0.00E+00	7.63E-02	2.10E-01	3.64E-01	2.10E+00	3.64E-02	0.25%	0.24%
Zinc	0.00E+00	mg/L	3.15E+01	mg/kg	4.79E+01	mg/kg	#######	2.91E+03	1.94E+00	6.34E+00	1.06E+00	8.84E-01	8.84E-01	1.84E-01	1.84E-01	0.00E+00	7.44E-02	1.13E-01	0.00E+00	4.60E-01	2.29E+00	0.00E+00	1.28E+00	0.00E+00	2.22E-02	0.00E+00	4.23E+00	1.60E+02	2.65E-02	3.20E+02	1.32E-02	0.02%	0.09%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.8E-05	9.0E-06	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	4.7E-04	9.4E-05	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.3E-02	1.3E-03	0.01%	0.01%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	4.8E-04	4.8E-05	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	8.7E-04	9.3E-05	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\,x\,Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0.6	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.05	unitless
Aq. Invert diet fraction =	0.15	unitless
Terr. Invert diet fraction =	0.15	unitless
Mammal diet fraction =	0.05	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.01363	kg/d
Sediment ingestion rate =	0.01363	kg/d
Food ingestion rate =	0.29	kg/d
Body weight =	5.78	kg
Home range =	637.5293	acres
Water intake rate =	0.476	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-109
Tier 1 COPCs
EEQs and Hazard Indices for the Raccoon-Louisiana Black Bear at LHAAP
Low Impact Sub-Area/Harrison Bayou Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
							---Unitless---								
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00
2,3,7,8-TCDD TEQ	9.44E-09	mg/L	1.41E-05	mg/kg	3.95E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.40E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	4.30E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.23E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.87E-04	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.76E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Aluminum	2.03E+01	mg/L	1.03E+04	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	6.37E-01	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.07E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.42E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.11E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	7.47E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.50E-04	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00
Barium	0.00E+00	mg/L	2.86E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	6.80E-02	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.82E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00
Cadmium	0.00E+00	mg/L	1.83E-01	mg/kg	3.84E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.58E+01	1.33E+00	9.52E-01	9.52E-01	9.22E-01	9.22E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.88E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Chromium	1.27E-02	mg/L	0.00E+00	mg/kg	1.22E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Copper	1.69E-02	mg/L	7.78E+00	mg/kg	7.43E+00	mg/kg	1.00E+00	5.92E+03	5.25E+00	1.32E+00	5.59E-01	5.75E-01	5.75E-01	1.49E-01	1.49E-01
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.86E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.75E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.20E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00
Iron	2.91E+01	mg/L	0.00E+00	mg/kg	1.00E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01		
Lead	7.24E-03	mg/L	0.00E+00	mg/kg	2.51E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	4.39E-01	NA	6.40E-02	6.40E-02	1.33E-02	1.33E-02
Manganese	9.37E-01	mg/L	0.00E+00	mg/kg	9.35E+02	mg/kg	1.00E+00	2.00E+03	2.10E+00	2.21E-01	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.95E-02	mg/kg	1.00E+00		2.87E+00	7.16E+00	NA	1.35E+00	1.35E+00	1.03E-01	1.03E-01
Mercury (methyl)	0.00E+00	mg/L	8.29E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.16E+00	NA	NA		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.41E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00
Nickel	0.00E+00	mg/L	1.10E+01	mg/kg	7.10E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	5.96E-02	6.65E-02	6.65E-02	1.01E-01	1.01E-01
Nitrate	7.46E-01	mg/L	7.48E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Nitrate/Nitrite	5.84E+01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	8.83E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	4.23E-01	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.80E-01	mg/kg	1.00E+00			1.14E+00	NA	1.88E+01	1.88E+01	1.66E-01	1.66E-01
Selenium	4.63E-03	mg/L	9.08E-01	mg/kg	4.13E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.18E+00	5.02E-01	4.64E-01	4.64E-01	1.95E-01	1.95E-01
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Sulfate	5.76E+01	mg/L	7.51E+01	mg/kg	2.30E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Thallium	7.55E-04	mg/L	6.00E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.04E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Vanadium	6.18E-02	mg/L	0.00E+00	mg/kg	1.53E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03
Zinc	0.00E+00	mg/L	3.58E+01	mg/kg	5.89E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.53E+00	1.01E+00	8.08E-01	8.08E-01	4.51E-01	4.51E-01

Chemical	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	EEQ N	mg/kg-d	EEQ L	EEQ N	EEQ L
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	7.77E-10	5.85E-09	1.63E-09	2.37E-06	1.37E-06	3.89E-07	0.00E+00	3.19E-10	0.00E+00	3.56E-10	0.00E+00	4.14E-06	1.00E-06	4.14E+00	1.00E-05	4.14E-01	3.44%	3.33%
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	0.00E+00	5.80E-07	0.00E+00	0.00E+00	9.65E-05	0.00E+00	1.99E-06	0.00E+00	2.39E-06	0.00E+00	1.01E-04	8.00E-01	1.27E-04	4.00E+00	2.54E-05	0.00%	0.00%
4,4'-DDE	0.00E+00	0.00E+00	1.78E-06	0.00E+00	0.00E+00	2.98E-04	0.00E+00	4.73E-05	0.00E+00	6.32E-06	0.00E+00	3.53E-04	8.00E-01	4.41E-04	4.00E+00	8.83E-05	0.00%	0.00%
4,4'-DDT	0.00E+00	0.00E+00	9.23E-07	0.00E+00	0.00E+00	1.59E-04	0.00E+00	3.17E-06	0.00E+00	5.48E-06	0.00E+00	1.69E-04	8.00E-01	2.11E-04	4.00E+00	4.22E-05	0.00%	0.00%
Aldrin	0.00E+00	0.00E+00	7.75E-08	0.00E+00	0.00E+00	1.33E-05	0.00E+00	2.25E-08	0.00E+00	3.19E-07	0.00E+00	1.38E-05	2.00E-01	6.88E-05	1.00E+00	1.38E-05	0.00%	0.00%
alpha-Chlordane	0.00E+00	0.00E+00	1.56E-07	0.00E+00	0.00E+00	2.63E-05	0.00E+00	2.69E-07	0.00E+00	6.41E-07	0.00E+00	2.74E-05	4.58E+00	5.98E-06	9.16E+00	2.99E-06	0.00%	0.00%
Aluminum	1.67E+00	4.26E+00	0.00E+00	1.29E-01	2.05E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.11E+02	1.93E+00	1.10E+02	1.93E+01	1.10E+01	91.03%	87.96%
Antimony	0.00E+00	0.00E+00	2.64E-04	0.00E+00	0.00E+00	3.22E-03	0.00E+00	7.91E-04	0.00E+00	1.57E-04	0.00E+00	4.43E-03	1.25E-01	3.55E-02	1.25E+00	3.55E-03	0.03%	0.03%
Aroclor 1242	0.00E+00	0.00E+00	1.27E-06	0.00E+00	0.00E+00	2.15E-04	0.00E+00	8.88E-06	0.00E+00	5.23E-06	0.00E+00	2.31E-04	6.85E-02	3.37E-03	6.85E-01	3.37E-04	0.00%	0.00%
Aroclor 1248	0.00E+00	0.00E+00	5.88E-07	0.00E+00	0.00E+00	9.96E-05	0.00E+00	2.55E-07	0.00E+00	2.42E-06	0.00E+00	1.03E-04	6.80E-02	1.51E-03	6.90E-01	1.49E-04	0.00%	0.00%
Aroclor 1254	0.00E+00	0.00E+00	1.70E-06	0.00E+00	0.00E+00	2.96E-04	0.00E+00	6.45E-07	0.00E+00	6.46E-06	0.00E+00	3.04E-04	6.80E-02	4.48E-03	6.90E-01	4.41E-04	0.00%	0.00%
Aroclor 1260	0.00E+00	0.00E+00	3.09E-06	0.00E+00	0.00E+00	5.65E-04	0.00E+00	6.03E-07	0.00E+00	2.12E-05	0.00E+00	5.90E-04	6.80E-02	8.68E-03	6.90E-01	8.55E-04	0.01%	0.01%
Aroclor 1268	0.00E+00	0.00E+00	3.52E-07	0.00E+00	0.00E+00	5.28E-05	0.00E+00	7.94E-06	0.00E+00	1.45E-06	0.00E+00	6.26E-05	6.80E-02	9.20E-04	6.90E-01	9.07E-05	0.00%	0.00%
Barium	0.00E+00	1.19E-01	0.00E+00	0.00E+00	5.72E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.84E+00	5.10E+00	1.15E+00	1.98E+01	2.95E-01	0.95%	2.37%
Benzoic Acid	0.00E+00	0.00E+00	2.82E-05	0.00E+00	0.00E+00	4.00E-03	0.00E+00	3.88E-03	0.00E+00	1.16E-04	0.00E+00	8.03E-03	4.00E+00	2.01E-03	4.00E+01	2.01E-04	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	1.17E-04	0.00E+00	0.00E+00	2.74E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.75E-02	1.83E+01	1.50E-03	1.83E+02	1.50E-04	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	7.58E-05	1.59E-04	0.00E+00	6.49E-03	4.40E-02	0.00E+00	6.49E-03	0.00E+00	5.24E-04	0.00E+00	5.77E-02	1.00E+00	5.77E-02	1.00E+01	5.77E-03	0.05%	0.05%
Chlordane	0.00E+00	0.00E+00	7.77E-08	0.00E+00	0.00E+00	1.31E-05	0.00E+00	1.34E-07	0.00E+00	3.20E-07	0.00E+00	1.36E-05	4.58E+00	2.98E-06	9.16E+00	1.49E-06	0.00%	0.00%
Chromium	1.04E-03	0.00E+00	5.07E-03	1.87E-02	0.00E+00	1.72E-01	0.00E+00	1.04E-01	0.00E+00	6.04E-03	0.00E+00	3.07E-01	3.28E+00	9.36E-02	1.31E+01	2.34E-02	0.08%	0.19%
cis-Nonachlor	0.00E+00	0.00E+00	1.03E-07	0.00E+00	0.00E+00	1.73E-05	0.00E+00	1.77E-07	0.00E+00	4.22E-07	0.00E+00	1.80E-05	4.58E+00	3.93E-06	9.16E+00	1.97E-06	0.00%	0.00%
Copper	1.39E-03	3.22E-03	3.08E-03	1.48E-01	1.81E-01	4.34E-02	0.00E+00	7.58E-02	0.00E+00	1.64E-03	0.00E+00	4.58E-01	1.17E+01	3.91E-02	1.51E+01	3.02E-02	0.03%	0.24%
Dieldrin	0.00E+00	0.00E+00	7.69E-08	0.00E+00	0.00E+00	1.26E-05	0.00E+00	5.40E-06	0.00E+00	3.16E-07	0.00E+00	1.84E-05	2.00E-02	9.19E-04	2.00E-01	9.19E-05	0.00%	0.00%
Endrin	0.00E+00	0.00E+00	1.14E-07	0.00E+00	0.00E+00	1.87E-05	0.00E+00	1.87E-07	0.00E+00	4.96E-07	0.00E+00	1.95E-05	9.20E-02	2.11E-04	9.20E-01	2.11E-05	0.00%	0.00%
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	0.00E+00	9.13E-08	0.00E+00	0.00E+00	1.52E-05	0.00E+00	7.39E-08	0.00E+00	3.76E-07	0.00E+00	1.57E-05	8.00E-02	1.96E-04	2.90E-01	5.42E-05	0.00%	0.00%
HMX	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	2.40E+00	0.00E+00	4.16E+00	4.30E+01	0.00E+00	3.47E+00	0.00E+00	7.12E-01	0.00E+00	3.07E-02	0.00E+00	5.38E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	5.96E-04	0.00E+00	1.04E-02	1.61E-02	0.00E+00	4.90E-02	NA	2.86E-02	0.00E+00	4.95E-04	0.00E+00	1.05E-01	8.00E+00	1.31E-02	8.00E+01	1.31E-03	0.01%	0.01%
Manganese	7.72E-02	0.00E+00	3.87E-01	2.77E+00	0.00E+00	9.17E-01	0.00E+00	1.66E+00	0.00E+00	1.32E-02	0.00E+00	5.83E+00	8.80E+01	6.62E-02	2.84E+02	2.05E-02	0.06%	0.16%
Mercury (inorganic)	0.00E+00	0.00E+00	2.47E-05	0.00E+00	0.00E+00	1.89E-03	NA	1.42E-03	0.00E+00	9.07E-06	0.00E+00	3.35E-03	1.00E+00	3.35E-03	3.00E+00	1.12E-03	0.00%	0.01%
Mercury (methyl)	0.00E+00	3.43E-05	0.00E+00	0.00E+00	1.06E-03	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	1.09E-03	1.50E-02	7.26E-02	2.50E-02	4.36E-02	0.06%	0.35%
Mirex	0.00E+00	0.00E+00	1.41E-07	0.00E+00	0.00E+00	2.46E-05	0.00E+00	2.08E-07	0.00E+00	5.82E-07	0.00E+00	2.55E-05	7.00E-02	3.65E-04	7.00E-01	3.65E-05	0.00%	0.00%
Nickel	0.00E+00	4.55E-03	2.94E-03	0.00E+00	1.13E-01	1.49E-01	0.00E+00	8.39E-03	0.00E+00	1.06E-03	0.00E+00	2.79E-01	4.00E+01	6.98E-03	8.00E+01	3.49E-03	0.01%	0.03%
Nitrate	6.14E-02	3.10E-04	0.00E+00	1.18E+00	6.97E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E+00	5.07E+02	2.46E-03	1.13E+03	1.10E-03	0.00%	0.01%
Nitrate/Nitrite	4.81E+00	0.00E+00	0.00E+00	9.23E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.71E+01	5.07E+02	1.92E-01	1.13E+03	8.59E-02	0.16%	0.69%
Oxychlordane	0.00E+00	0.00E+00	7.28E-08	0.00E+00	0.00E+00	1.19E-05	0.00E+00	8.22E-08	0.00E+00	3.00E-07	0.00E+00	1.24E-05	4.58E+00	2.70E-06	9.16E+00	1.35E-06	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	0.00E+00	3.66E-07	0.00E+00	0.00E+00	5.95E-05	0.00E+00	5.25E-07	0.00E+00	1.51E-06	0.00E+00	6.19E-05	2.40E-01	2.58E-04	2.40E+00	2.58E-05	0.00%	0.00%
Pentachlorophenol	0.00E+00	0.00E+00	1.75E-04	0.00E+00	0.00E+00	2.79E-02	0.00E+00	5.29E-04	0.00E+00	7.20E-04	0.00E+00	2.93E-02	2.40E-01	1.22E-01	2.40E+00	1.22E-02	0.10%	0.10%
Perchlorate	0.00E+00	0.00E+00	1.16E-04	0.00E+00	0.00E+00	1.42E-03	NA	9.34E-02	0.00E+00	6.88E-05	0.00E+00	9.50E-02	8.50E+00	1.12E-02	2.55E+01	3.72E-03	0.01%	0.03%
Selenium	3.81E-04	3.76E-04	1.71E-04	1.40E-03	1.81E-02	2.16E-03	0.00E+00	3.40E-03	0.00E+00	1.19E-04	0.00E+00	2.61E-02	2.00E-01	1.31E-01	3.30E-01	7.92E-02	0.11%	0.64%
Silver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	0.00E+00	5.91E-03	0.00E+00	0.00E+00	1.76E-02	0.00E+00	8.87E-02	0.00E+00	3.51E-03	0.00E+00	1.16E-01	2.63E+02	4.40E-04	7.89E+02	1.47E-04	0.00%	0.00%
Sulfate	4.74E+00	3.11E-02	9.53E-02	9.10E+01	7.00E-01	1.16E+00	0.00E+00	1.43E+00	0.00E+00	5.65E-02	0.00E+00	9.92E+01	NA	NA	NA	NA	NA	NA
Thallium	6.22E-05	2.48E-04	0.00E+00	1.78E-02	1.20E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.00E-02	7.40E-03	4.06E+00	7.40E-02	4.06E-01	3.37%	3.26%
trans-Nonachlor	0.00E+00	0.00E+00	1.26E-07	0.00E+00	0.00E+00	2.12E-05	0.00E+00	2.17E-07	0.00E+00	5.17E-07	0.00E+00	2.21E-05	4.58E+00	4.82E-06	9.16E+00	2.41E-06	0.00%	0.00%
Vanadium	5.09E-03	0.00E+00	6.35E-03	9.76E-02	0.00E+00	5.99E-03	0.00E+00	1.09E-03	0.00E+00	1.34E-04	0.00E+00	1.16E-01	2.10E-01	5.54E-01	2.10E+00	5.54E-02	0.46%	0.44%
Zinc	0.00E+00	1.48E-02	2.44E-02	0.00E+00	1.19E+00	1.44E+00	0.00E+00	8.44E-01	0.00E+00	3.93E-02	0.00E+00	3.56E+00	1.60E+02	2.23E-02	3.20E+02	1.11E-02	0.02%	0.09%

Group	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	2.0E-05	1.0E-05	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	7.8E-04	1.6E-04	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.9E-02	1.9E-03	0.02%	0.02%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	1.5E-03	1.5E-04	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	1.2E-03	1.3E-04	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\, x\, Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0.6	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.05	unitless
Aq. Invert diet fraction =	0.15	unitless
Terr. Invert diet fraction =	0.15	unitless
Mammal diet fraction =	0.05	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.002394	kg/d
Sediment ingestion rate =	0.002394	kg/d
Food ingestion rate =	0.171	kg/d
Body weight =	5.78	kg
Home range =	2011	acres
Water intake rate =	0.476	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-110
Tier 2 COPCs
EEQs and Hazard Indices for the Raccoon-Louisiana Black Bear at LHAAP
Low Impact Sub-Area/Harrison Bayou Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
									----------Unitless	----------						mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	8.00E-09	mg/L	4.00E-06	mg/kg	3.18E-06	mg/kg	#######	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	6.59E-10	1.66E-09	1.32E-09	2.73E-07	8.29E-08	1.56E-07	0.00E+00	2.19E-10	0.00E+00	2.23E-10	0.00E+00	5.16E-07	1.00E-06	5.16E-01	1.00E-05	5.16E-02	0.62%	0.60%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	8.00E-04	mg/kg	#######		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.32E-07	0.00E+00	0.00E+00	3.18E-05	0.00E+00	3.98E-07	0.00E+00	1.04E-06	0.00E+00	3.36E-05	8.00E-01	4.19E-05	4.00E+00	8.39E-06	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	3.10E-03	mg/kg	#######		4.75E+00	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	1.28E-06	0.00E+00	0.00E+00	1.24E-04	0.00E+00	7.48E-06	0.00E+00	4.32E-06	0.00E+00	1.37E-04	8.00E-01	1.71E-04	4.00E+00	3.42E-05	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.07E-03	mg/kg	#######		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	4.42E-07	0.00E+00	0.00E+00	4.40E-05	0.00E+00	5.31E-07	0.00E+00	1.40E-06	0.00E+00	4.64E-05	8.00E-01	5.79E-05	4.00E+00	1.16E-05	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	#######			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	7.29E-08	0.00E+00	0.00E+00	7.24E-06	0.00E+00	1.52E-08	0.00E+00	2.28E-07	0.00E+00	7.55E-06	2.00E-01	3.78E-05	1.00E+00	7.55E-06	0.00%	0.00%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.15E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.31E-07	0.00E+00	0.00E+00	1.27E-05	0.00E+00	5.22E-08	0.00E+00	4.09E-07	0.00E+00	1.33E-05	4.58E+00	2.90E-06	9.16E+00	1.45E-06	0.00%	0.00%
Aluminum	1.12E+01	mg/L	7.50E+03	mg/kg	0.00E+00	mg/kg	#######	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	9.24E-01	3.11E+00	0.00E+00	7.14E-02	1.50E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.54E+02	1.93E+00	7.97E+01	1.93E+01	7.97E+00	95.99%	93.16%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-01	mg/kg	#######			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	2.11E-04	0.00E+00	0.00E+00	6.78E-04	0.00E+00	3.35E-04	0.00E+00	8.34E-05	0.00E+00	1.31E-03	1.25E-01	1.05E-02	1.25E+00	1.05E-03	0.01%	0.01%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.55E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.06E-06	0.00E+00	0.00E+00	1.03E-04	0.00E+00	3.80E-07	0.00E+00	3.31E-06	0.00E+00	1.08E-04	6.85E-02	1.58E-03	6.85E-01	1.58E-04	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.21E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	5.01E-07	0.00E+00	0.00E+00	4.89E-05	0.00E+00	1.80E-07	0.00E+00	1.57E-06	0.00E+00	5.11E-05	6.80E-02	7.52E-04	6.90E-01	7.41E-05	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	3.32E-03	mg/kg	#######		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	1.37E-06	0.00E+00	0.00E+00	1.38E-04	0.00E+00	2.11E-07	0.00E+00	2.44E-06	0.00E+00	1.42E-04	6.80E-02	2.08E-03	6.90E-01	2.05E-04	0.00%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	4.07E-03	mg/kg	#######			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	1.69E-06	0.00E+00	0.00E+00	1.78E-04	0.00E+00	4.64E-08	0.00E+00	1.01E-05	0.00E+00	1.89E-04	6.80E-02	2.79E-03	6.90E-01	2.75E-04	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	7.92E-04	mg/kg	#######			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.28E-07	0.00E+00	0.00E+00	2.84E-05	0.00E+00	7.40E-06	0.00E+00	1.03E-06	0.00E+00	3.71E-05	6.80E-02	5.46E-04	6.90E-01	5.38E-05	0.00%	0.00%
Barium	0.00E+00	mg/L	2.32E+02	mg/kg	0.00E+00	mg/kg	#######	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	9.59E-02	0.00E+00	0.00E+00	4.62E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.72E+00	5.10E+00	9.26E-01	1.98E+01	2.38E-01	1.11%	2.79%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	5.10E-02	mg/kg	#######			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.11E-05	0.00E+00	0.00E+00	1.73E-03	0.00E+00	2.91E-03	0.00E+00	6.61E-05	0.00E+00	4.73E-03	4.00E+00	1.18E-03	4.00E+01	1.18E-04	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.33E-01	mg/kg	0.00E+00	mg/kg	#######	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	0.00E+00	9.64E-05	0.00E+00	0.00E+00	4.82E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.92E-03	1.83E+01	2.68E-04	1.83E+02	2.69E-05	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	mg/L	1.83E-01	mg/kg	3.02E-01	mg/kg	#######	1.15E+03	6.00E-01	2.87E+01	1.33E+00	1.06E+00	1.06E+00	6.72E-01	6.72E-01	0.00E+00	7.58E-05	1.25E-04	0.00E+00	4.87E-04	3.86E-02	0.00E+00	5.69E-03	0.00E+00	3.01E-04	0.00E+00	4.52E-02	1.00E+00	4.52E-02	1.00E+01	4.52E-03	0.05%	0.05%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	7.17E-08	0.00E+00	0.00E+00	6.98E-06	0.00E+00	2.86E-08	0.00E+00	2.24E-07	0.00E+00	7.30E-06	4.58E+00	1.59E-06	9.16E+00	7.97E-07	0.00%	0.00%
Chromium	9.95E-03	mg/L	0.00E+00	mg/kg	1.10E+01	mg/kg	#######	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	8.19E-04	0.00E+00	4.57E-03	5.30E-03	0.00E+00	1.50E-02	0.00E+00	8.02E-03	0.00E+00	1.38E-03	0.00E+00	3.51E-02	3.28E+00	1.07E-02	1.31E+01	2.67E-03	0.01%	0.03%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	8.78E-08	0.00E+00	0.00E+00	8.55E-06	0.00E+00	3.51E-08	0.00E+00	2.75E-07	0.00E+00	8.95E-06	4.58E+00	1.95E-06	9.16E+00	9.77E-07	0.00%	0.00%
Copper	1.19E-02	mg/L	6.82E+00	mg/kg	6.53E+00	mg/kg	#######	1.11E+03	1.56E+00	1.45E+00	6.06E-01	6.22E-01	6.22E-01	8.97E-02	8.97E-02	9.78E-04	2.82E-03	2.70E-03	1.95E-02	4.72E-02	4.21E-02	0.00E+00	7.21E-02	0.00E+00	8.66E-04	0.00E+00	1.88E-01	1.17E+01	1.61E-02	1.51E+01	1.24E-02	0.02%	0.15%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.72E-04	mg/kg	#######		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	7.12E-08	0.00E+00	0.00E+00	6.72E-06	0.00E+00	7.32E-08	0.00E+00	2.23E-07	0.00E+00	7.08E-06	2.00E-02	3.54E-04	2.00E-01	3.54E-05	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-04	mg/kg	#######			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	9.85E-08	0.00E+00	0.00E+00	9.29E-06	0.00E+00	1.16E-07	0.00E+00	4.27E-07	0.00E+00	9.93E-06	9.20E-02	1.08E-04	9.20E-01	1.08E-05	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.93E-04	mg/kg	#######			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	8.00E-08	0.00E+00	0.00E+00	7.67E-06	0.00E+00	5.44E-08	0.00E+00	2.50E-07	0.00E+00	8.05E-06	8.00E-02	1.01E-04	2.90E-01	2.78E-05	0.00%	0.00%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	1.61E+01	mg/L	0.00E+00	mg/kg	9.10E+03	mg/kg	#######	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	1.33E+00	0.00E+00	3.77E+00	5.97E+00	0.00E+00	1.45E+00	0.00E+00	6.46E-01	0.00E+00	2.37E-02	0.00E+00	1.32E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	5.66E-03	mg/L	0.00E+00	mg/kg	2.21E+01	mg/kg	#######	4.48E+02	7.10E-02	4.50E-01	NA	6.78E-02	6.78E-02	1.16E-02	1.16E-02	4.66E-04	0.00E+00	9.14E-03	3.75E-03	0.00E+00	4.41E-02	NA	2.66E-02	0.00E+00	3.80E-04	0.00E+00	8.44E-02	8.00E+00	1.06E-02	8.00E+01	1.06E-03	0.01%	0.01%
Manganese	6.92E-01	mg/L	0.00E+00	mg/kg	8.30E+02	mg/kg	#######	2.50E+02	4.20E-01	2.26E-01	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	5.70E-02	0.00E+00	3.44E-01	2.56E-01	0.00E+00	8.32E-01	0.00E+00	1.16E+00	0.00E+00	9.31E-03	0.00E+00	2.66E+00	8.80E+01	3.02E-02	2.84E+02	9.37E-03	0.04%	0.11%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-02	mg/kg	#######		1.14E+00	7.64E+00	NA	1.41E+00	1.41E+00	9.15E-02	9.15E-02	0.00E+00	0.00E+00	2.24E-05	0.00E+00	0.00E+00	1.83E-03	NA	1.35E-03	0.00E+00	7.31E-06	0.00E+00	3.21E-03	1.00E+00	3.21E-03	3.00E+00	1.07E-03	0.00%	0.01%
Mercury (methyl)	0.00E+00	mg/L	6.13E-02	mg/kg	0.00E+00	mg/kg	#######		1.14E+00	NA	1.33E+00	NA	NA			0.00E+00	2.54E-05	0.00E+00	0.00E+00	3.09E-04	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	3.34E-04	1.50E-02	2.23E-02	2.50E-02	1.34E-02	0.03%	0.16%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.88E-04	mg/kg	#######			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.19E-07	0.00E+00	0.00E+00	1.20E-05	0.00E+00	1.76E-08	0.00E+00	3.74E-07	0.00E+00	1.25E-05	7.00E-02	1.78E-04	7.00E-01	1.78E-05	0.00%	0.00%
Nickel	0.00E+00	mg/L	9.70E+00	mg/kg	6.36E+00	mg/kg	#######		4.86E-01	1.06E+00	6.15E-02	6.84E-02	6.84E-02	8.71E-02	8.71E-02	0.00E+00	4.02E-03	2.63E-03	0.00E+00	2.09E-02	2.99E-02	0.00E+00	7.72E-03	0.00E+00	8.19E-04	0.00E+00	6.60E-02	4.00E+01	1.65E-03	8.00E+01	8.25E-04	0.00%	0.01%
Nitrate	4.32E-01	mg/L	4.60E-01	mg/kg	0.00E+00	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	3.55E-02	1.90E-04	0.00E+00	1.92E-01	8.57E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.29E-01	5.07E+02	4.51E-04	1.13E+03	2.02E-04	0.00%	0.00%
Nitrate/Nitrite	2.93E+01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	3.01E+02								2.41E+00	0.00E+00	0.00E+00	1.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.54E+01	5.07E+02	3.05E-02	1.13E+03	1.37E-02	0.04%	0.16%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E-04	mg/kg	#######			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	7.07E-08	0.00E+00	0.00E+00	6.67E-06	0.00E+00	7.98E-08	0.00E+00	2.21E-07	0.00E+00	7.04E-06	4.58E+00	1.54E-06	9.16E+00	7.69E-07	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.62E-04	mg/kg	#######			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.33E-07	0.00E+00	0.00E+00	2.18E-05	0.00E+00	2.73E-07	0.00E+00	7.28E-07	0.00E+00	2.31E-05	2.40E-01	9.61E-05	2.40E+00	9.61E-06	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-01	mg/kg	#######			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.03E-04	0.00E+00	0.00E+00	9.41E-03	0.00E+00	1.87E-04	0.00E+00	3.21E-04	0.00E+00	1.00E-02	2.40E-01	4.17E-02	2.40E+00	4.17E-03	0.05%	0.05%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	7.70E-02	mg/kg	#######			3.00E-01	NA	3.19E+01	3.19E+01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	3.19E-05	0.00E+00	0.00E+00	1.03E-04	NA	4.36E-02	0.00E+00	1.26E-05	0.00E+00	4.38E-02	8.50E+00	5.15E-03	2.55E+01	1.72E-03	0.01%	0.02%
Selenium	3.90E-03	mg/L	7.65E-01	mg/kg	3.74E-01	mg/kg	#######	2.05E+02	4.50E+00	1.21E+00	4.93E-01	4.59E-01	4.59E-01	1.51E-01	1.51E-01	3.22E-04	3.17E-04	1.55E-04	1.18E-03	1.53E-02	2.01E-03	0.00E+00	3.04E-03	0.00E+00	8.34E-05	0.00E+00	2.24E-02	2.00E-01	1.12E-01	3.30E-01	6.78E-02	0.13%	0.79%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.30E+01	mg/kg	#######		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	5.38E-03	0.00E+00	0.00E+00	5.01E-03	0.00E+00	4.84E-02	0.00E+00	2.13E-03	0.00E+00	6.09E-02	2.63E+02	2.32E-04	7.89E+02	7.72E-05	0.00%	0.00%
Sulfate	4.15E+01	mg/L	5.13E+01	mg/kg	1.30E+02	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	3.42E+00	2.12E-02	5.38E-02	1.85E+01	9.56E-02	1.73E-01	0.00E+00	4.85E-01	0.00E+00	2.13E-02	0.00E+00	2.27E+01	NA	NA	NA	NA	NA	NA
Thallium	5.86E-04	mg/L	4.92E-01	mg/kg	0.00E+00	mg/kg	#######	7.50E+01	4.50E+00							4.83E-05	2.04E-04	0.00E+00	6.50E-05	9.82E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.01E-02	7.40E-03	1.37E+00	7.40E-02	1.37E-01	1.65%	1.60%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.05E-07	0.00E+00	0.00E+00	1.02E-05	0.00E+00	4.18E-08	0.00E+00	3.28E-07	0.00E+00	1.07E-05	4.58E+00	2.33E-06	9.16E+00	1.16E-06	0.00%	0.00%
Vanadium	4.29E-02	mg/L	0.00E+00	mg/kg	1.45E+01	mg/kg	#######	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	3.53E-03	0.00E+00	5.99E-03	1.91E-02	0.00E+00	2.70E-03	0.00E+00	9.25E-04	0.00E+00	1.17E-04	0.00E+00	3.23E-02	2.10E-01	1.54E-01	2.10E+00	1.54E-02	0.19%	0.18%
Zinc	0.00E+00	mg/L	3.15E+01	mg/kg	4.79E+01	mg/kg	#######	2.91E+03	1.94E+00	6.34E+00	1.06E+00	8.84E-01	8.84E-01	1.84E-01	1.84E-01	0.00E+00	1.31E-02	1.99E-02	0.00E+00	2.71E-01	1.35E+00	0.00E+00	7.53E-01	0.00E+00	1.31E-02	0.00E+00	2.42E+00	1.60E+02	1.51E-02	3.20E+02	7.56E-03	0.02%	0.09%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.0E-05	5.2E-06	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	2.7E-04	5.4E-05	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	7.7E-03	7.7E-04	0.01%	0.01%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	2.7E-04	2.7E-05	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	5.0E-04	5.4E-05	0.00%	0.00%

Intake Equation:

$$E_j = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi \times Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): | n | See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0.6	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.05	unitless
Aq. Invert diet fraction =	0.15	unitless
Terr. Invert diet fraction =	0.15	unitless
Mammal diet fraction =	0.05	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.002394	kg/d
Sediment ingestion rate =	0.002394	kg/d
Food ingestion rate =	0.171	kg/d
Body weight =	5.78	kg
Home range =	2011	acres
Water intake rate =	0.476	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-111
Tier 1 COPCs
EEQs and Hazard Indices for the Short-tailed Shrew at LHAAP
Low Impact Sub-Area/Harrison Bayou Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Total Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
							Unitless								
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00
2,3,7,8-TCDD TEQ	9.44E-09	mg/L	1.41E-05	mg/kg	3.95E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.42E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	4.15E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.82E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.04E-04	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.68E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Aluminum	2.03E+01	mg/L	1.03E+04	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.68E-01	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.04E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.37E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.04E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	6.22E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.97E-04	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00
Barium	0.00E+00	mg/L	2.86E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	2.50E-02	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.82E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00
Cadmium	0.00E+00	mg/L	1.83E-01	mg/kg	3.95E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.55E+01	1.33E+00	9.40E-01	9.40E-01	9.22E-01	9.22E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.93E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Chromium	1.27E-02	mg/L	0.00E+00	mg/kg	1.16E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.52E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Copper	1.69E-02	mg/L	7.78E+00	mg/kg	7.35E+00	mg/kg	1.00E+00	5.92E+03	5.25E+00	1.33E+00	5.59E-01	5.79E-01	5.79E-01	1.49E-01	1.49E-01
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.88E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.77E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.36E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00
Iron	2.91E+01	mg/L	0.00E+00	mg/kg	1.01E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01		
Lead	7.24E-03	mg/L	0.00E+00	mg/kg	2.30E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	4.47E-01	NA	6.65E-02	6.65E-02	1.33E-02	1.33E-02
Manganese	9.37E-01	mg/L	0.00E+00	mg/kg	9.62E+02	mg/kg	1.00E+00	2.00E+03	2.10E+00	2.20E-01	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.69E-02	mg/kg	1.00E+00		2.87E+00	7.38E+00	NA	1.38E+00	1.38E+00	1.03E-01	1.03E-01
Mercury (methyl)	0.00E+00	mg/L	8.29E-02	mg/kg	0.00E+00	mg/kg	1.00E+00			NA	1.16E+00	NA	NA		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.43E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00
Nickel	0.00E+00	mg/L	1.10E+01	mg/kg	6.83E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	5.96E-02	6.72E-02	6.72E-02	1.01E-01	1.01E-01
Nitrate	7.46E-01	mg/L	7.48E-01	mg/kg	1.86E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Nitrate/Nitrite	5.84E+01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.84E-04	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	9.03E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	5.32E-01	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	9.01E-02	mg/kg	1.00E+00			1.14E+00	NA	2.99E+01	2.99E+01	1.66E-01	1.66E-01
Selenium	4.63E-03	mg/L	9.08E-01	mg/kg	3.97E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.19E+00	5.02E-01	4.62E-01	4.62E-01	1.95E-01	1.95E-01
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Sulfate	5.76E+01	mg/L	7.51E+01	mg/kg	2.06E+03	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Thallium	7.55E-04	mg/L	6.00E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.16E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Vanadium	6.18E-02	mg/L	0.00E+00	mg/kg	1.54E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03
Zinc	0.00E+00	mg/L	3.58E+01	mg/kg	5.97E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.48E+00	1.01E+00	8.03E-01	8.03E-01	4.51E-01	4.51E-01

Chemical	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL		LOAEL		Percent Contribution to	Percent Contribution to
	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	EEQ N	mg/kg-d	EEQ L	EEQ N	EEQ L
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	2.08E-09	0.00E+00	5.52E-08	0.00E+00	0.00E+00	9.43E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.49E-06	1.00E-06	9.49E+00	1.00E-05	9.49E-01	43.28%	33.68%
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	0.00E+00	1.98E-05	0.00E+00	0.00E+00	2.36E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.38E-03	8.00E-01	2.98E-03	4.00E+00	5.96E-04	0.01%	0.02%
4,4'-DDE	0.00E+00	0.00E+00	5.79E-05	0.00E+00	0.00E+00	6.95E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.01E-03	8.00E-01	8.76E-03	4.00E+00	1.75E-03	0.04%	0.06%
4,4'-DDT	0.00E+00	0.00E+00	2.55E-05	0.00E+00	0.00E+00	3.15E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.18E-03	8.00E-01	3.97E-03	4.00E+00	7.94E-04	0.02%	0.03%
Aldrin	0.00E+00	0.00E+00	2.84E-06	0.00E+00	0.00E+00	3.51E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-04	2.00E-01	1.77E-03	1.00E+00	3.54E-04	0.01%	0.01%
alpha-Chlordane	0.00E+00	0.00E+00	5.14E-06	0.00E+00	0.00E+00	6.23E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.28E-04	4.58E+00	1.37E-04	9.16E+00	6.86E-05	0.00%	0.00%
Aluminum	4.47E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.47E+00	1.93E+00	2.32E+00	1.93E+01	2.32E-01	10.56%	8.22%
Antimony	0.00E+00	0.00E+00	7.93E-03	0.00E+00	0.00E+00	6.95E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.75E-02	1.25E-01	6.20E-01	1.25E+00	6.20E-02	2.83%	2.20%
Aroclor 1242	0.00E+00	0.00E+00	4.24E-05	0.00E+00	0.00E+00	5.16E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.20E-03	6.85E-02	7.59E-02	6.85E-01	7.59E-03	0.35%	0.27%
Aroclor 1248	0.00E+00	0.00E+00	1.92E-05	0.00E+00	0.00E+00	2.33E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.35E-03	6.80E-02	3.45E-02	6.80E-01	3.45E-03	0.16%	0.12%
Aroclor 1254	0.00E+00	0.00E+00	5.64E-05	0.00E+00	0.00E+00	7.04E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.09E-03	6.80E-02	1.04E-01	6.80E-01	1.04E-02	0.48%	0.37%
Aroclor 1260	0.00E+00	0.00E+00	8.69E-05	0.00E+00	0.00E+00	1.14E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E-02	6.80E-02	1.69E-01	6.80E-01	1.69E-02	0.77%	0.60%
Aroclor 1268	0.00E+00	0.00E+00	1.25E-05	0.00E+00	0.00E+00	1.35E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E-03	6.80E-02	2.00E-02	6.80E-01	2.00E-03	0.09%	0.07%
Barium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E+00	0.00E+00	1.98E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	0.00E+00	3.49E-04	0.00E+00	0.00E+00	3.57E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.60E-02	4.00E+00	9.00E-03	4.00E+01	9.00E-04	0.04%	0.03%
bis(2-ethylhexyl)phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	0.00E+00	5.52E-03	0.00E+00	0.00E+00	1.08E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E+00	1.00E+00	1.09E+00	1.00E+01	1.09E-01	4.96%	3.86%
Chlordane	0.00E+00	0.00E+00	2.70E-06	0.00E+00	0.00E+00	3.27E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.30E-04	4.58E+00	7.20E-05	9.16E+00	3.60E-05	0.00%	0.00%
Chromium	2.79E-03	0.00E+00	1.62E-01	0.00E+00	0.00E+00	3.95E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.11E+00	3.28E+00	1.25E+00	1.31E+01	3.13E-01	5.72%	11.11%
cis-Nonachlor	0.00E+00	0.00E+00	3.52E-06	0.00E+00	0.00E+00	4.27E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.30E-04	4.58E+00	9.40E-05	9.16E+00	4.70E-05	0.00%	0.00%
Copper	3.72E-03	0.00E+00	1.03E-01	0.00E+00	0.00E+00	1.05E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.16E+00	1.17E+01	9.87E-02	1.51E+01	7.63E-02	0.45%	2.71%
Dieldrin	0.00E+00	0.00E+00	2.63E-06	0.00E+00	0.00E+00	3.09E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.12E-04	2.00E-02	1.56E-02	2.00E-01	1.56E-03	0.07%	0.06%
Endrin	0.00E+00	0.00E+00	3.87E-06	0.00E+00	0.00E+00	4.54E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E-04	9.20E-02	4.98E-03	9.20E-01	4.98E-04	0.02%	0.02%
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	0.00E+00	3.30E-06	0.00E+00	0.00E+00	3.93E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.97E-04	8.00E-02	4.96E-03	2.90E-01	1.37E-03	0.02%	0.05%
HMX	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	6.40E+00	0.00E+00	1.40E+02	0.00E+00	0.00E+00	8.43E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.31E+02	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	1.59E-03	0.00E+00	3.22E-01	0.00E+00	0.00E+00	1.11E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.43E+00	8.00E+00	1.79E-01	8.00E+01	1.79E-02	0.81%	0.63%
Manganese	2.06E-01	0.00E+00	1.34E+01	0.00E+00	0.00E+00	2.27E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.64E+01	8.80E+01	4.13E-01	2.84E+02	1.28E-01	1.88%	4.54%
Mercury (inorganic)	0.00E+00	0.00E+00	7.94E-04	0.00E+00	0.00E+00	4.51E-02	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.59E-02	1.32E+01	3.48E-03	3.96E+01	1.16E-03	0.02%	0.04%
Mercury (methyl)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	3.20E-02	0.00E+00	1.60E-01	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	0.00E+00	4.79E-06	0.00E+00	0.00E+00	5.98E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.03E-04	7.00E-02	8.61E-03	7.00E-01	8.61E-04	0.04%	0.03%
Nickel	0.00E+00	0.00E+00	9.54E-02	0.00E+00	0.00E+00	3.47E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.57E+00	4.00E+01	8.92E-02	8.00E+01	4.46E-02	0.41%	1.58%
Nitrate	1.64E-01	0.00E+00	2.60E-02	0.00E+00	0.00E+00	2.28E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.18E-01	5.07E+02	8.25E-04	1.13E+03	3.70E-04	0.00%	0.01%
Nitrate/Nitrite	1.29E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.29E+01	5.07E+02	2.54E-02	1.13E+03	1.14E-02	0.12%	0.40%
Oxychlordane	0.00E+00	0.00E+00	2.56E-06	0.00E+00	0.00E+00	3.01E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.04E-04	4.58E+00	6.64E-05	9.16E+00	3.32E-05	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	0.00E+00	1.26E-05	0.00E+00	0.00E+00	1.47E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.48E-03	2.40E-01	6.19E-03	2.40E+00	6.19E-04	0.03%	0.02%
Pentachlorophenol	0.00E+00	0.00E+00	7.43E-03	0.00E+00	0.00E+00	8.49E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.56E-01	2.40E-01	3.57E+00	2.40E+00	3.57E-01	16.27%	12.66%
Perchlorate	0.00E+00	0.00E+00	1.26E-03	0.00E+00	0.00E+00	1.10E-02	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.23E-02	8.50E+00	1.45E-03	2.55E+01	4.82E-04	0.01%	0.02%
Selenium	1.02E-03	0.00E+00	5.55E-03	0.00E+00	0.00E+00	5.08E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.73E-02	2.00E-01	2.87E-01	3.30E-01	1.74E-01	1.31%	6.17%
Silver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	0.00E+00	1.99E-01	0.00E+00	0.00E+00	4.26E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.25E-01	2.63E+02	2.38E-03	7.89E+02	7.92E-04	0.01%	0.03%
Sulfate	1.27E+01	0.00E+00	2.88E+01	0.00E+00	0.00E+00	2.52E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.94E+02	NA	NA	NA	NA	NA	NA
Thallium	1.66E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.66E-04	7.40E-03	2.24E-02	7.40E-02	2.24E-03	0.10%	0.08%
trans-Nonachlor	0.00E+00	0.00E+00	4.41E-06	0.00E+00	0.00E+00	5.35E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.39E-04	4.58E+00	1.18E-04	9.16E+00	5.89E-05	0.00%	0.00%
Vanadium	1.36E-02	0.00E+00	2.15E-01	0.00E+00	0.00E+00	1.45E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.73E-01	2.10E-01	1.78E+00	2.10E+00	1.78E-01	8.11%	6.31%
Zinc	0.00E+00	0.00E+00	8.33E-01	0.00E+00	0.00E+00	3.51E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.59E+01	1.60E+02	2.25E-01	3.20E+02	1.12E-01	1.02%	3.98%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	4.9E-04	2.4E-04	0.00%	0.01%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	1.6E-02	3.1E-03	0.07%	0.11%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	4.0E-01	4.0E-02	1.84%	1.43%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	2.2E-02	2.4E-03	0.10%	0.09%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	1	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.000209	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.001611	kg/d
Body weight =	0.015	kg
Home range =	0.074131	acres
Water intake rate =	0.0033	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-112
Tier 2 COPCs
EEQs and Hazard Indices for the Short-tailed Shrew at LHAAP
Low Impact Sub-Area/Harrison Bayou Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Total Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL		LOAEL		Percent Contribution to	Percent Contribution to
							---------------	-------	-------	-------	Unitless	-------	-------	-------	---------------	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	EEQ N	mg/kg-d	EEQ L	EEQ N	EEQ L
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	8.00E-09	mg/L	4.00E-06	mg/kg	3.18E-06	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	1.76E-09	0.00E+00	4.44E-08	0.00E+00	0.00E+00	3.76E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.81E-06	1.00E-06	3.81E+00	1.00E-05	3.81E-01	36.09%	26.20%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	8.25E-04	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.15E-05	0.00E+00	0.00E+00	7.93E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.05E-04	8.00E-01	1.01E-03	4.00E+00	2.01E-04	0.01%	0.01%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	3.08E-03	mg/kg	1.00E+00		4.75E+00	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	4.31E-05	0.00E+00	0.00E+00	2.98E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.02E-03	8.00E-01	3.78E-03	4.00E+00	7.56E-04	0.04%	0.05%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E-03	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	1.54E-05	0.00E+00	0.00E+00	1.10E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E-03	8.00E-01	1.39E-03	4.00E+00	2.78E-04	0.01%	0.02%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.81E-04	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.53E-06	0.00E+00	0.00E+00	1.80E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E-04	2.00E-01	9.13E-04	1.00E+00	1.83E-04	0.01%	0.01%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.11E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.35E-06	0.00E+00	0.00E+00	3.04E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.08E-04	4.58E+00	6.73E-05	9.16E+00	3.36E-05	0.00%	0.00%
Aluminum	1.12E+01	mg/L	7.50E+03	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	2.47E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.47E+00	1.93E+00	1.28E+00	1.93E+01	1.28E-01	12.12%	8.79%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.12E-01	mg/kg	1.00E+00			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	7.15E-03	0.00E+00	0.00E+00	1.65E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.36E-02	1.25E-01	1.89E-01	1.25E+00	1.89E-02	1.79%	1.30%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.54E-05	0.00E+00	0.00E+00	2.48E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.51E-03	6.85E-02	3.67E-02	6.85E-01	3.67E-03	0.35%	0.25%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.17E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.63E-05	0.00E+00	0.00E+00	1.15E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.16E-03	6.80E-02	1.71E-02	6.80E-01	1.71E-03	0.16%	0.12%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	3.27E-03	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	4.57E-05	0.00E+00	0.00E+00	3.29E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.33E-03	6.80E-02	4.90E-02	6.80E-01	4.90E-03	0.46%	0.34%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	4.04E-03	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	5.64E-05	0.00E+00	0.00E+00	4.26E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.32E-03	6.80E-02	6.35E-02	6.80E-01	6.35E-03	0.60%	0.44%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.43E-04	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.18E-05	0.00E+00	0.00E+00	7.31E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.43E-04	6.80E-02	1.09E-02	6.80E-01	1.09E-03	0.10%	0.08%
Barium	0.00E+00	mg/L	2.32E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E+00	0.00E+00	1.98E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	2.19E-02	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.06E-04	0.00E+00	0.00E+00	1.80E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E-02	4.00E+00	4.58E-03	4.00E+01	4.58E-04	0.04%	0.03%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.33E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	mg/L	1.83E-01	mg/kg	3.19E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	2.80E+01	1.33E+00	1.03E+00	1.03E+00	6.72E-01	6.72E-01	0.00E+00	0.00E+00	4.46E-03	0.00E+00	0.00E+00	9.62E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.66E-01	1.00E+00	9.66E-01	1.00E+01	9.66E-02	9.15%	6.65%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.16E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.01E-06	0.00E+00	0.00E+00	2.10E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.13E-04	4.58E+00	4.66E-05	9.16E+00	2.33E-05	0.00%	0.00%
Chromium	9.95E-03	mg/L	0.00E+00	mg/kg	1.09E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	2.19E-03	0.00E+00	1.52E-01	0.00E+00	0.00E+00	3.57E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.11E-01	3.28E+00	1.56E-01	1.31E+01	3.89E-02	1.48%	2.68%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.19E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.06E-06	0.00E+00	0.00E+00	2.14E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.17E-04	4.58E+00	4.74E-05	9.16E+00	2.37E-05	0.00%	0.00%
Copper	1.19E-02	mg/L	6.82E+00	mg/kg	6.48E+00	mg/kg	1.00E+00	1.11E+03	1.56E+00	1.46E+00	6.06E-01	6.25E-01	6.25E-01	8.97E-02	8.97E-02	2.61E-03	0.00E+00	9.05E-02	0.00E+00	0.00E+00	1.02E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E+00	1.17E+01	9.49E-02	1.51E+01	7.34E-02	0.90%	5.04%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.46E-06	0.00E+00	0.00E+00	1.67E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.69E-04	2.00E-02	8.45E-03	2.00E-01	8.45E-04	0.08%	0.06%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.64E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	3.69E-06	0.00E+00	0.00E+00	2.50E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.54E-04	9.20E-02	2.76E-03	9.20E-01	2.76E-04	0.03%	0.02%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.04E-04	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.85E-06	0.00E+00	0.00E+00	1.96E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.99E-04	8.00E-02	2.49E-03	2.90E-01	6.86E-04	0.02%	0.05%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	1.61E+01	mg/L	0.00E+00	mg/kg	9.10E+03	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	3.55E+00	0.00E+00	1.27E+02	0.00E+00	0.00E+00	3.52E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.66E+02	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	5.66E-03	mg/L	0.00E+00	mg/kg	2.03E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	4.57E-01	NA	7.03E-02	7.03E-02	1.16E-02	1.16E-02	1.25E-03	0.00E+00	2.84E-01	0.00E+00	0.00E+00	9.98E-01	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E+00	8.00E+00	1.60E-01	8.00E+01	1.60E-02	1.52%	1.10%
Manganese	6.92E-01	mg/L	0.00E+00	mg/kg	8.30E+02	mg/kg	1.00E+00	2.50E+02	4.20E-01	2.26E-01	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	1.52E-01	0.00E+00	1.16E+01	0.00E+00	0.00E+00	2.01E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.19E+01	8.80E+01	3.62E-01	2.84E+02	1.12E-01	3.43%	7.72%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.07E-02	mg/kg	1.00E+00		1.14E+00	7.97E+00	NA	1.45E+00	1.45E+00	9.15E-02	9.15E-02	0.00E+00	0.00E+00	7.08E-04	0.00E+00	0.00E+00	4.34E-02	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.41E-02	1.32E+01	3.34E-03	3.96E+01	1.11E-03	0.03%	0.08%
Mercury (methyl)	0.00E+00	mg/L	6.13E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	1.33E+00	NA	NA			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	3.20E-02	0.00E+00	1.60E-01	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.87E-04	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.01E-06	0.00E+00	0.00E+00	2.88E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.92E-04	7.00E-02	4.18E-03	7.00E-01	4.18E-04	0.04%	0.03%
Nickel	0.00E+00	mg/L	9.70E+00	mg/kg	6.19E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	6.15E-02	6.89E-02	6.89E-02	8.71E-02	8.71E-02	0.00E+00	0.00E+00	8.64E-02	0.00E+00	0.00E+00	7.04E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.90E-01	4.00E+01	1.98E-02	8.00E+01	9.88E-03	0.19%	0.68%
Nitrate	4.32E-01	mg/L	4.60E-01	mg/kg	1.13E+00	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	9.50E-02	0.00E+00	1.57E-02	0.00E+00	0.00E+00	3.63E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.47E-01	5.07E+02	2.90E-04	1.13E+03	1.30E-04	0.00%	0.01%
Nitrate/Nitrite	2.93E+01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02								6.44E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.44E+00	5.07E+02	1.27E-02	1.13E+03	5.70E-03	0.12%	0.39%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E-04	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.38E-06	0.00E+00	0.00E+00	1.62E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.64E-04	4.58E+00	3.58E-05	9.16E+00	1.79E-05	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.57E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	7.78E-06	0.00E+00	0.00E+00	5.24E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.31E-04	2.40E-01	2.21E-03	2.40E+00	2.21E-04	0.02%	0.02%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	3.80E-01	mg/kg	1.00E+00			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	5.30E-03	0.00E+00	0.00E+00	3.49E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.55E-01	2.40E-01	1.48E+00	2.40E+00	1.48E-01	13.99%	10.16%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	4.97E-02	mg/kg	1.00E+00			3.00E-01	NA	3.82E+01	3.82E+01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	6.94E-04	0.00E+00	0.00E+00	1.60E-03	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.29E-03	8.50E+00	2.70E-04	2.55E+01	9.00E-05	0.00%	0.01%
Selenium	3.90E-03	mg/L	7.65E-01	mg/kg	3.70E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.21E+00	4.93E-01	4.59E-01	4.59E-01	1.51E-01	1.51E-01	8.59E-04	0.00E+00	5.17E-03	0.00E+00	0.00E+00	4.83E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.43E-02	2.00E-01	2.71E-01	3.30E-01	1.64E-01	2.57%	11.31%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.30E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	1.81E-01	0.00E+00	0.00E+00	1.21E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.03E-01	2.63E+02	1.15E-03	7.89E+02	3.84E-04	0.01%	0.03%
Sulfate	4.15E+01	mg/L	5.13E+01	mg/kg	1.38E+03	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	9.13E+00	0.00E+00	1.92E+01	0.00E+00	0.00E+00	4.44E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.27E+01	NA	NA	NA	NA	NA	NA
Thallium	5.86E-04	mg/L	4.92E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00							1.29E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.29E-04	7.40E-03	1.74E-02	7.40E-02	1.74E-03	0.17%	0.12%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.64E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.68E-06	0.00E+00	0.00E+00	2.57E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.61E-04	4.58E+00	5.70E-05	9.16E+00	2.85E-05	0.00%	0.00%
Vanadium	4.29E-02	mg/L	0.00E+00	mg/kg	1.45E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	9.43E-03	0.00E+00	2.02E-01	0.00E+00	0.00E+00	6.53E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.77E-01	2.10E-01	1.32E+00	2.10E+00	1.32E-01	12.48%	9.06%
Zinc	0.00E+00	mg/L	3.15E+01	mg/kg	4.80E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	6.34E+00	1.06E+00	8.84E-01	8.84E-01	1.84E-01	1.84E-01	0.00E+00	0.00E+00	6.69E-01	0.00E+00	0.00E+00	3.27E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.33E+01	1.60E+02	2.08E-01	3.20E+02	1.04E-01	1.97%	7.16%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	2.5E-04	1.3E-04	0.00%	0.01%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	6.2E-03	1.2E-03	0.06%	0.08%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.8E-01	1.8E-02	1.68%	1.22%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	1.2E-02	1.3E-03	0.11%	0.09%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\,x\,Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text tables.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	1	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.000209	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.001611	kg/d
Body weight =	0.015	kg
Home range =	0.963707	acres
Water intake rate =	0.0033	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-113
Tier 1 COPCs
EEQs and Hazard Indices for the Red Fox at LHAAP
Low Impact Sub-Area/Harrison Bayou Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Total Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
									----Unitless----						
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00
2,3,7,8-TCDD TEQ	9.44E-09	mg/L	1.41E-05	mg/kg	3.95E-06	mg/kg	#######	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.42E-03	mg/kg	#######		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	4.15E-03	mg/kg	#######		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.82E-03	mg/kg	#######		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.04E-04	mg/kg	#######			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.68E-04	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Aluminum	2.03E+01	mg/L	1.03E+04	mg/kg	0.00E+00	mg/kg	#######	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.68E-01	mg/kg	#######			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.04E-03	mg/kg	#######			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.37E-03	mg/kg	#######			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.04E-03	mg/kg	#######		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	6.22E-03	mg/kg	#######			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.97E-04	mg/kg	#######			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00
Barium	0.00E+00	mg/L	2.86E+02	mg/kg	0.00E+00	mg/kg	#######	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	2.50E-02	mg/kg	#######			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.82E-01	mg/kg	0.00E+00	mg/kg	#######	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00
Cadmium	0.00E+00	mg/L	1.83E-01	mg/kg	3.95E-01	mg/kg	#######	1.63E+03	7.99E+00	2.55E+01	1.33E+00	9.40E-01	9.40E-01	9.22E-01	9.22E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.93E-04	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Chromium	1.27E-02	mg/L	0.00E+00	mg/kg	1.16E+01	mg/kg	#######	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.52E-04	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Copper	1.69E-02	mg/L	7.78E+00	mg/kg	7.35E+00	mg/kg	#######	5.92E+03	5.25E+00	1.33E+00	5.59E-01	5.79E-01	5.79E-01	1.49E-01	1.49E-01
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.88E-04	mg/kg	#######		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.77E-04	mg/kg	#######			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.36E-04	mg/kg	#######			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00
Iron	2.91E+01	mg/L	0.00E+00	mg/kg	1.01E+04	mg/kg	#######	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		2.19E+01		1.41E+01	1.41E+01	1.41E+01		
Lead	7.24E-03	mg/L	0.00E+00	mg/kg	2.30E+01	mg/kg	#######	1.50E+03	6.07E-01	4.47E-01	NA	6.65E-02	6.65E-02	1.33E-02	1.33E-02
Manganese	9.37E-01	mg/L	0.00E+00	mg/kg	9.62E+02	mg/kg	#######	2.00E+03	2.10E+00	2.20E-01	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.69E-02	mg/kg	#######		2.87E+00	7.38E+00	NA	1.38E+00	1.38E+00	1.03E-01	1.03E-01
Mercury (methyl)	0.00E+00	mg/L	8.29E-02	mg/kg	0.00E+00	mg/kg	#######		2.87E+00	NA	1.16E+00	NA	NA		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.43E-04	mg/kg	#######			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00
Nickel	0.00E+00	mg/L	1.10E+01	mg/kg	6.83E+00	mg/kg	#######		2.32E+00	4.73E+00	5.96E-02	6.72E-02	6.72E-02	1.01E-01	1.01E-01
Nitrate	7.46E-01	mg/L	7.48E-01	mg/kg	1.86E+00	mg/kg	#######	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Nitrate/Nitrite	5.84E+01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	1.07E+03							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	#######			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	9.03E-04	mg/kg	#######			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	5.32E-01	mg/kg	#######			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	9.01E-02	mg/kg	#######			1.14E+00	NA	2.99E+01	2.99E+01	1.66E-01	1.66E-01
Selenium	4.63E-03	mg/L	9.08E-01	mg/kg	3.97E-01	mg/kg	#######	2.05E+02	4.50E+00	1.19E+00	5.02E-01	4.62E-01	4.62E-01	1.95E-01	1.95E-01
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.50E+00		1.70E-01	1.70E-01	1.70E-01		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+01	mg/kg	#######		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Sulfate	5.76E+01	mg/L	7.51E+01	mg/kg	2.06E+03	mg/kg	#######	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Thallium	7.55E-04	mg/L	6.00E-01	mg/kg	0.00E+00	mg/kg	#######	1.59E+04	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.16E-04	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Vanadium	6.18E-02	mg/L	0.00E+00	mg/kg	1.54E+01	mg/kg	#######	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03
Zinc	0.00E+00	mg/L	3.58E+01	mg/kg	5.97E+01	mg/kg	#######	5.00E+03	7.53E+00	5.48E+00	1.01E+00	8.03E-01	8.03E-01	4.51E-01	4.51E-01

Chemical	EED Surface Water (mg/kg-d)	EED Sediment (mg/kg-d)	EED Soil (mg/kg-d)	EED Fish (mg/kg-d)	EED Aq. Invert. (mg/kg-d)	EED Terr. Invert. (mg/kg-d)	EED Aq. Plants (mg/kg-d)	EED Terr. Plants (mg/kg-d)	EED Plant Roots (mg/kg-d)	EED Mammals (mg/kg-d)	EED Birds (mg/kg-d)	Total EED (mg/kg-d)	NOAEL (mg/kg-d)	EEQ N	LOAEL (mg/kg-d)	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	7.97E-10	0.00E+00	3.74E-09	0.00E+00	0.00E+00	8.90E-08	0.00E+00	7.28E-11	0.00E+00	5.69E-09	1.22E-09	1.01E-07	1.00E-06	1.01E-01	1.00E-05	1.01E-02	7.05%	5.65%
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	0.00E+00	1.34E-06	0.00E+00	0.00E+00	2.23E-05	0.00E+00	4.60E-07	0.00E+00	3.86E-05	8.28E-06	7.10E-05	8.00E-01	8.87E-05	4.00E+00	1.77E-05	0.01%	0.01%
4,4'-DDE	0.00E+00	0.00E+00	3.93E-06	0.00E+00	0.00E+00	6.55E-05	0.00E+00	1.04E-05	0.00E+00	9.74E-05	2.09E-05	1.98E-04	8.00E-01	2.48E-04	4.00E+00	4.96E-05	0.02%	0.03%
4,4'-DDT	0.00E+00	0.00E+00	1.73E-06	0.00E+00	0.00E+00	2.97E-05	0.00E+00	5.91E-07	0.00E+00	7.17E-05	1.54E-05	1.19E-04	8.00E-01	1.49E-04	4.00E+00	2.98E-05	0.01%	0.02%
Aldrin	0.00E+00	0.00E+00	1.93E-07	0.00E+00	0.00E+00	3.32E-06	0.00E+00	5.59E-09	0.00E+00	5.55E-06	1.19E-06	1.03E-05	2.00E-01	5.13E-05	1.00E+00	1.03E-05	0.00%	0.01%
alpha-Chlordane	0.00E+00	0.00E+00	3.49E-07	0.00E+00	0.00E+00	5.88E-06	0.00E+00	6.02E-08	0.00E+00	1.00E-05	2.15E-06	1.85E-05	4.58E+00	4.03E-06	9.16E+00	2.02E-06	0.00%	0.00%
Aluminum	1.72E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.72E+00	1.93E+00	8.89E-01	1.93E+01	8.89E-02	62.38%	49.96%
Antimony	0.00E+00	0.00E+00	5.38E-04	0.00E+00	0.00E+00	6.56E-04	0.00E+00	1.61E-04	0.00E+00	2.23E-03	4.78E-04	4.07E-03	1.25E-01	3.25E-02	1.25E+00	3.25E-03	2.28%	1.83%
Aroclor 1242	0.00E+00	0.00E+00	2.88E-06	0.00E+00	0.00E+00	4.87E-05	0.00E+00	2.01E-06	0.00E+00	8.28E-05	1.77E-05	1.54E-04	6.85E-02	2.25E-03	6.85E-01	2.25E-04	0.16%	0.13%
Aroclor 1248	0.00E+00	0.00E+00	1.30E-06	0.00E+00	0.00E+00	2.20E-05	0.00E+00	5.62E-08	0.00E+00	3.74E-05	8.01E-06	6.87E-05	6.80E-02	1.01E-03	6.90E-01	9.96E-05	0.07%	0.06%
Aroclor 1254	0.00E+00	0.00E+00	3.83E-06	0.00E+00	0.00E+00	6.64E-05	0.00E+00	1.45E-07	0.00E+00	1.01E-04	2.17E-05	1.94E-04	6.80E-02	2.85E-03	6.90E-01	2.80E-04	0.20%	0.16%
Aroclor 1260	0.00E+00	0.00E+00	5.90E-06	0.00E+00	0.00E+00	1.08E-04	0.00E+00	1.15E-07	0.00E+00	2.82E-04	6.05E-05	4.56E-04	6.80E-02	6.71E-03	6.90E-01	6.61E-04	0.47%	0.37%
Aroclor 1268	0.00E+00	0.00E+00	8.50E-07	0.00E+00	0.00E+00	1.27E-05	0.00E+00	1.91E-06	0.00E+00	2.44E-05	5.24E-06	4.52E-05	6.80E-02	6.64E-04	6.90E-01	6.55E-05	0.05%	0.04%
Barium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E+00	0.00E+00	1.98E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	0.00E+00	2.37E-05	0.00E+00	0.00E+00	3.36E-04	0.00E+00	3.26E-04	0.00E+00	6.82E-04	1.46E-04	1.51E-03	4.00E+00	3.78E-04	4.00E+01	3.78E-05	0.03%	0.02%
bis(2-ethylhexyl)phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	0.00E+00	3.74E-04	0.00E+00	0.00E+00	1.02E-02	0.00E+00	1.51E-03	0.00E+00	8.62E-03	1.85E-03	2.25E-02	1.00E+00	2.25E-02	1.00E+01	2.25E-03	1.58%	1.27%
Chlordane	0.00E+00	0.00E+00	1.83E-07	0.00E+00	0.00E+00	3.08E-06	0.00E+00	3.16E-08	0.00E+00	5.26E-06	1.13E-06	9.69E-06	4.58E+00	2.12E-06	9.16E+00	1.06E-06	0.00%	0.00%
Chromium	1.07E-03	0.00E+00	1.10E-02	0.00E+00	0.00E+00	3.72E-02	0.00E+00	2.26E-02	0.00E+00	9.16E-02	1.96E-02	1.83E-01	3.28E+00	5.58E-02	1.31E+01	1.39E-02	3.92%	7.83%
cis-Nonachlor	0.00E+00	0.00E+00	2.39E-07	0.00E+00	0.00E+00	4.03E-06	0.00E+00	4.12E-08	0.00E+00	6.87E-06	1.47E-06	1.27E-05	4.58E+00	2.76E-06	9.16E+00	1.38E-06	0.00%	0.00%
Copper	1.43E-03	0.00E+00	6.97E-03	0.00E+00	0.00E+00	9.90E-03	0.00E+00	1.72E-02	0.00E+00	2.60E-02	5.57E-03	6.71E-02	1.17E+01	5.73E-03	1.51E+01	4.43E-03	0.40%	2.49%
Dieldrin	0.00E+00	0.00E+00	1.79E-07	0.00E+00	0.00E+00	2.92E-06	0.00E+00	1.25E-06	0.00E+00	5.14E-06	1.10E-06	1.06E-05	2.00E-02	5.29E-04	2.00E-01	5.29E-05	0.04%	0.03%
Endrin	0.00E+00	0.00E+00	2.62E-07	0.00E+00	0.00E+00	4.29E-06	0.00E+00	4.29E-08	0.00E+00	7.97E-06	1.71E-06	1.43E-05	9.20E-02	1.55E-04	9.20E-01	1.55E-05	0.01%	0.01%
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	0.00E+00	2.24E-07	0.00E+00	0.00E+00	3.71E-06	0.00E+00	1.81E-08	0.00E+00	6.43E-06	1.38E-06	1.18E-05	8.00E-02	1.47E-04	2.90E-01	4.06E-05	0.01%	0.02%
HMX	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	2.46E+00	0.00E+00	9.53E+00	0.00E+00	0.00E+00	7.95E-01	0.00E+00	1.63E-01	0.00E+00	4.92E-01	1.05E-01	1.35E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	6.12E-04	0.00E+00	2.18E-02	0.00E+00	0.00E+00	1.04E-02	NA	6.21E-03	0.00E+00	7.25E-03	1.55E-03	4.79E-02	8.00E+00	5.98E-03	8.00E+01	5.98E-04	0.42%	0.34%
Manganese	7.91E-02	0.00E+00	9.12E-01	0.00E+00	0.00E+00	2.14E-01	0.00E+00	3.90E-01	0.00E+00	2.18E-01	4.67E-02	1.86E+00	8.80E+01	2.11E-02	2.84E+02	6.55E-03	1.48%	3.68%
Mercury (inorganic)	0.00E+00	0.00E+00	5.39E-05	0.00E+00	0.00E+00	4.25E-04	NA	3.17E-04	0.00E+00	1.38E-04	2.97E-05	9.64E-04	1.00E+00	9.64E-04	3.00E+00	3.21E-04	0.07%	0.18%
Mercury (methyl)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	1.50E-02	0.00E+00	2.50E-02	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	0.00E+00	3.25E-07	0.00E+00	0.00E+00	5.64E-06	0.00E+00	4.78E-08	0.00E+00	9.35E-06	2.00E-06	1.74E-05	7.00E-02	2.48E-04	7.00E-01	2.48E-05	0.02%	0.01%
Nickel	0.00E+00	0.00E+00	6.47E-03	0.00E+00	0.00E+00	3.27E-02	0.00E+00	1.86E-03	0.00E+00	1.63E-02	3.50E-03	6.09E-02	4.00E+01	1.52E-03	8.00E+01	7.61E-04	0.11%	0.43%
Nitrate	6.30E-02	0.00E+00	1.77E-03	0.00E+00	0.00E+00	2.15E-03	0.00E+00	2.64E-03	0.00E+00	7.32E-03	1.57E-03	7.84E-02	5.07E+02	1.55E-04	1.13E+03	6.94E-05	0.01%	0.04%
Nitrate/Nitrite	4.93E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.93E+00	5.07E+02	9.73E-03	1.13E+03	4.37E-03	0.68%	2.45%
Oxychlordane	0.00E+00	0.00E+00	1.67E-07	0.00E+00	0.00E+00	2.72E-06	0.00E+00	1.88E-08	0.00E+00	4.79E-06	1.03E-06	8.73E-06	4.58E+00	1.91E-06	9.16E+00	9.53E-07	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	0.00E+00	8.55E-07	0.00E+00	0.00E+00	1.39E-05	0.00E+00	1.22E-07	0.00E+00	2.46E-05	5.27E-06	4.47E-05	2.40E-01	1.86E-04	2.40E+00	1.86E-05	0.01%	0.01%
Pentachlorophenol	0.00E+00	0.00E+00	5.04E-04	0.00E+00	0.00E+00	8.01E-03	0.00E+00	1.52E-04	0.00E+00	1.45E-02	3.11E-03	2.63E-02	2.40E-01	1.09E-01	2.40E+00	1.09E-02	7.68%	6.15%
Perchlorate	0.00E+00	0.00E+00	8.54E-05	0.00E+00	0.00E+00	1.04E-04	NA	1.09E-02	0.00E+00	3.54E-04	7.59E-05	1.16E-02	8.50E+00	1.36E-03	2.55E+01	4.53E-04	0.10%	0.25%
Selenium	3.91E-04	0.00E+00	3.76E-04	0.00E+00	0.00E+00	4.79E-04	0.00E+00	7.44E-04	0.00E+00	1.83E-03	3.92E-04	4.21E-03	2.00E-01	2.11E-02	3.30E-01	1.28E-02	1.48%	7.17%
Silver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	0.00E+00	1.35E-02	0.00E+00	0.00E+00	4.02E-03	0.00E+00	2.02E-02	0.00E+00	5.60E-02	1.20E-02	1.06E-01	2.63E+02	4.02E-04	7.89E+02	1.34E-04	0.03%	0.08%
Sulfate	4.86E+00	0.00E+00	1.95E+00	0.00E+00	0.00E+00	2.38E+00	0.00E+00	2.92E+00	0.00E+00	8.09E+00	1.73E+00	2.19E+01	NA	NA	NA	NA	NA	NA
Thallium	6.38E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.38E-05	7.40E-03	8.62E-03	7.40E-02	8.62E-04	0.60%	0.48%
trans-Nonachlor	0.00E+00	0.00E+00	2.99E-07	0.00E+00	0.00E+00	5.04E-06	0.00E+00	5.16E-08	0.00E+00	8.61E-06	1.84E-06	1.58E-05	4.58E+00	3.46E-06	9.16E+00	1.73E-06	0.00%	0.00%
Vanadium	5.22E-03	0.00E+00	1.46E-02	0.00E+00	0.00E+00	1.37E-03	0.00E+00	2.49E-04	0.00E+00	2.15E-03	4.61E-04	2.40E-02	2.10E-01	1.14E-01	2.10E+00	1.14E-02	8.02%	6.42%
Zinc	0.00E+00	0.00E+00	5.65E-02	0.00E+00	0.00E+00	3.31E-01	0.00E+00	1.94E-01	0.00E+00	6.36E-01	1.36E-01	1.35E+00	1.60E+02	8.47E-03	3.20E+02	4.23E-03	0.59%	2.38%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.4E-05	7.1E-06	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	4.9E-04	9.7E-05	0.03%	0.05%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.3E-02	1.3E-03	0.95%	0.75%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	7.4E-04	7.9E-05	0.05%	0.04%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text tables.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0.12	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0.03	unitless
Mammal diet fraction =	0.7	unitless
Bird diet fraction =	0.15	unitless
Soil ingestion rate =	0.004263	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.152	kg/d
Body weight =	4.5	kg
Home range =	247.1044	acres
Water intake rate =	0.38	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-114
Tier 2 COPCs
EEQs and Hazard Indices for the Red Fox at LHAAP
Low Impact Sub-Area/Harrison Bayou Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Total Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water (mg/kg-d)	EED Sediment (mg/kg-d)	EED Soil (mg/kg-d)	EED Fish (mg/kg-d)	EED Aq. Invert. (mg/kg-d)	EED Terr. Invert. (mg/kg-d)	EED Aq. Plants (mg/kg-d)	EED Terr. Plants (mg/kg-d)	EED Plant Roots (mg/kg-d)	EED Mammals (mg/kg-d)	EED Birds (mg/kg-d)	Total EED (mg/kg-d)	NOAEL (mg/kg-d)	EEQ N	LOAEL (mg/kg-d)	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							---Unitless---																										
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	8.00E-09	mg/L	4.00E-06	mg/kg	3.18E-06	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	6.76E-10	0.00E+00	3.01E-09	0.00E+00	0.00E+00	3.55E-08	0.00E+00	5.00E-11	0.00E+00	3.56E-09	7.62E-10	4.36E-08	1.00E-06	4.36E-02	1.00E-05	4.36E-03	5.40%	4.26%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	8.25E-04	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	7.82E-07	0.00E+00	0.00E+00	7.48E-06	0.00E+00	9.36E-08	0.00E+00	1.71E-05	3.66E-06	2.91E-05	8.00E-01	3.64E-05	4.00E+00	7.28E-06	0.00%	0.01%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	3.08E-03	mg/kg	1.00E+00		4.75E+00	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	2.92E-06	0.00E+00	0.00E+00	2.81E-05	0.00E+00	1.70E-06	0.00E+00	6.87E-05	1.47E-05	1.16E-04	8.00E-01	1.45E-04	4.00E+00	2.90E-05	0.02%	0.03%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E-03	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	1.04E-06	0.00E+00	0.00E+00	1.03E-05	0.00E+00	1.25E-07	0.00E+00	2.31E-05	4.94E-06	3.95E-05	8.00E-01	4.94E-05	4.00E+00	9.88E-06	0.01%	0.01%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.81E-04	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.71E-07	0.00E+00	0.00E+00	1.70E-06	0.00E+00	3.57E-09	0.00E+00	3.75E-06	8.04E-07	6.43E-06	2.00E-01	3.21E-05	1.00E+00	6.43E-06	0.00%	0.01%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.11E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.95E-07	0.00E+00	0.00E+00	2.87E-06	0.00E+00	1.18E-08	0.00E+00	6.45E-06	1.38E-06	1.10E-05	4.58E+00	2.40E-06	9.16E+00	1.20E-06	0.00%	0.00%
Aluminum	1.12E+01	mg/L	7.50E+03	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	9.48E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.48E-01	1.93E+00	4.91E-01	1.93E+01	4.91E-02	60.84%	48.03%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.12E-01	mg/kg	1.00E+00			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	4.85E-04	0.00E+00	0.00E+00	1.56E-04	0.00E+00	7.68E-05	0.00E+00	1.34E-03	2.87E-04	2.34E-03	1.25E-01	1.88E-02	1.25E+00	1.88E-03	2.32%	1.84%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.40E-06	0.00E+00	0.00E+00	2.34E-05	0.00E+00	8.61E-08	0.00E+00	5.25E-05	1.12E-05	8.96E-05	6.85E-02	1.31E-03	6.85E-01	1.31E-04	0.16%	0.13%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.17E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.11E-06	0.00E+00	0.00E+00	1.08E-05	0.00E+00	3.98E-08	0.00E+00	2.43E-05	5.20E-06	4.14E-05	6.80E-02	6.09E-04	6.90E-01	6.00E-05	0.08%	0.06%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	3.27E-03	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	3.10E-06	0.00E+00	0.00E+00	3.10E-05	0.00E+00	4.75E-08	0.00E+00	3.85E-05	8.25E-06	8.09E-05	6.80E-02	1.19E-03	6.90E-01	1.17E-04	0.15%	0.11%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	4.04E-03	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	3.82E-06	0.00E+00	0.00E+00	4.02E-05	0.00E+00	1.05E-08	0.00E+00	1.59E-04	3.42E-05	2.38E-04	6.80E-02	3.49E-03	6.90E-01	3.44E-04	0.43%	0.34%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.43E-04	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	7.99E-07	0.00E+00	0.00E+00	6.90E-06	0.00E+00	1.80E-06	0.00E+00	1.75E-05	3.74E-06	3.07E-05	6.80E-02	4.52E-04	6.90E-01	4.45E-05	0.06%	0.04%
Barium	0.00E+00	mg/L	2.32E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E+00	0.00E+00	1.98E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	2.19E-02	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.08E-05	0.00E+00	0.00E+00	1.70E-04	0.00E+00	2.86E-04	0.00E+00	4.54E-04	9.73E-05	1.03E-03	4.00E+00	2.57E-04	4.00E+01	2.57E-05	0.03%	0.03%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.33E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	mg/L	1.83E-01	mg/kg	3.19E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	2.80E+01	1.33E+00	1.03E+00	1.03E+00	6.72E-01	6.72E-01	0.00E+00	0.00E+00	3.03E-04	0.00E+00	0.00E+00	9.08E-03	0.00E+00	1.34E-03	0.00E+00	5.08E-03	1.09E-03	1.69E-02	1.00E+00	1.69E-02	1.00E+01	1.69E-03	2.09%	1.65%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.16E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.04E-07	0.00E+00	0.00E+00	1.99E-06	0.00E+00	8.15E-09	0.00E+00	4.47E-06	9.57E-07	7.62E-06	4.58E+00	1.66E-06	9.16E+00	8.32E-07	0.00%	0.00%
Chromium	9.95E-03	mg/L	0.00E+00	mg/kg	1.09E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	8.40E-04	0.00E+00	1.03E-02	0.00E+00	0.00E+00	3.37E-03	0.00E+00	1.81E-03	0.00E+00	2.17E-02	4.66E-03	4.27E-02	3.28E+00	1.30E-02	1.31E+01	3.25E-03	1.61%	3.18%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.19E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.08E-07	0.00E+00	0.00E+00	2.02E-06	0.00E+00	8.30E-09	0.00E+00	4.55E-06	9.75E-07	7.76E-06	4.58E+00	1.69E-06	9.16E+00	8.47E-07	0.00%	0.00%
Copper	1.19E-02	mg/L	6.82E+00	mg/kg	6.48E+00	mg/kg	1.00E+00	1.11E+03	1.56E+00	1.46E+00	6.06E-01	6.25E-01	6.25E-01	8.97E-02	8.97E-02	1.00E-03	0.00E+00	6.14E-03	0.00E+00	0.00E+00	9.60E-03	0.00E+00	1.64E-02	0.00E+00	1.37E-02	2.95E-03	4.99E-02	1.17E+01	4.26E-03	1.51E+01	3.29E-03	0.53%	3.22%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.67E-07	0.00E+00	0.00E+00	1.57E-06	0.00E+00	1.71E-08	0.00E+00	3.65E-06	7.82E-07	6.19E-06	2.00E-02	3.09E-04	2.00E-01	3.09E-05	0.04%	0.03%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.64E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	2.50E-07	0.00E+00	0.00E+00	2.36E-06	0.00E+00	2.94E-08	0.00E+00	7.59E-06	1.63E-06	1.19E-05	9.20E-02	1.29E-04	9.20E-01	1.29E-05	0.02%	0.01%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.04E-04	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.93E-07	0.00E+00	0.00E+00	1.85E-06	0.00E+00	1.31E-08	0.00E+00	4.23E-06	9.06E-07	7.19E-06	8.00E-02	8.99E-05	2.90E-01	2.48E-05	0.01%	0.02%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	1.61E+01	mg/L	0.00E+00	mg/kg	9.10E+03	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	1.36E+00	0.00E+00	8.62E+00	0.00E+00	0.00E+00	3.32E-01	0.00E+00	1.48E-01	0.00E+00	3.78E-01	8.11E-02	1.09E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	5.66E-03	mg/L	0.00E+00	mg/kg	2.03E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	4.57E-01	NA	7.03E-02	7.03E-02	1.16E-02	1.16E-02	4.78E-04	0.00E+00	1.93E-02	0.00E+00	0.00E+00	9.42E-03	NA	5.79E-03	0.00E+00	5.60E-03	1.20E-03	4.17E-02	8.00E+00	5.22E-03	8.00E+01	5.22E-04	0.65%	0.51%
Manganese	6.92E-01	mg/L	0.00E+00	mg/kg	8.30E+02	mg/kg	1.00E+00	2.50E+02	4.20E-01	2.26E-01	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	5.84E-02	0.00E+00	7.86E-01	0.00E+00	0.00E+00	1.90E-01	0.00E+00	2.66E-01	0.00E+00	1.49E-01	3.19E-02	1.48E+00	8.80E+01	1.68E-02	2.84E+02	5.21E-03	2.09%	5.10%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.07E-02	mg/kg	1.00E+00		1.14E+00	7.97E+00	NA	1.45E+00	1.45E+00	9.15E-02	9.15E-02	0.00E+00	0.00E+00	4.80E-05	0.00E+00	0.00E+00	4.09E-04	NA	2.98E-04	0.00E+00	1.10E-04	2.35E-05	8.89E-04	1.00E+00	8.89E-04	3.00E+00	2.96E-04	0.11%	0.29%
Mercury (methyl)	0.00E+00	mg/L	6.13E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	1.33E+00	NA	NA			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	1.50E-02	0.00E+00	2.50E-02	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.87E-04	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.72E-07	0.00E+00	0.00E+00	2.72E-06	0.00E+00	4.00E-09	0.00E+00	5.95E-06	1.27E-06	1.02E-05	7.00E-02	1.46E-04	7.00E-01	1.46E-05	0.02%	0.01%
Nickel	0.00E+00	mg/L	9.70E+00	mg/kg	6.19E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	6.15E-02	6.89E-02	6.89E-02	8.71E-02	8.71E-02	0.00E+00	0.00E+00	5.86E-03	0.00E+00	0.00E+00	6.64E-03	0.00E+00	1.73E-03	0.00E+00	1.27E-02	2.73E-03	2.97E-02	4.00E+01	7.42E-04	8.00E+01	3.71E-04	0.09%	0.36%
Nitrate	4.32E-01	mg/L	4.60E-01	mg/kg	1.13E+00	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	3.65E-02	0.00E+00	1.07E-03	0.00E+00	0.00E+00	3.43E-04	0.00E+00	9.60E-04	0.00E+00	2.95E-03	6.33E-04	4.24E-02	5.07E+02	8.36E-05	1.13E+03	3.75E-05	0.01%	0.04%
Nitrate/Nitrite	2.93E+01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02								2.47E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.47E+00	5.07E+02	4.88E-03	1.13E+03	2.19E-03	0.60%	2.14%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E-04	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.62E-07	0.00E+00	0.00E+00	1.52E-06	0.00E+00	1.82E-08	0.00E+00	3.54E-06	7.58E-07	6.00E-06	4.58E+00	1.31E-06	9.16E+00	6.55E-07	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.57E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	5.28E-07	0.00E+00	0.00E+00	4.94E-06	0.00E+00	6.19E-08	0.00E+00	1.15E-05	2.47E-06	1.95E-05	2.40E-01	8.14E-05	2.40E+00	8.14E-06	0.01%	0.01%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	3.80E-01	mg/kg	1.00E+00			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.60E-04	0.00E+00	0.00E+00	3.29E-03	0.00E+00	6.55E-05	0.00E+00	7.87E-03	1.69E-03	1.33E-02	2.40E-01	5.53E-02	2.40E+00	5.53E-03	6.85%	5.41%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	4.97E-02	mg/kg	1.00E+00			3.00E-01	NA	3.82E+01	3.82E+01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	4.71E-05	0.00E+00	0.00E+00	1.51E-05	NA	7.70E-03	0.00E+00	1.30E-04	2.79E-05	7.92E-03	8.50E+00	9.32E-04	2.55E+01	3.11E-04	0.12%	0.30%
Selenium	3.90E-03	mg/L	7.65E-01	mg/kg	3.70E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.21E+00	4.93E-01	4.59E-01	4.59E-01	1.51E-01	1.51E-01	3.30E-04	0.00E+00	3.51E-04	0.00E+00	0.00E+00	4.55E-04	0.00E+00	6.89E-04	0.00E+00	1.32E-03	2.83E-04	3.43E-03	2.00E-01	1.72E-02	3.30E-01	1.04E-02	2.13%	10.17%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.30E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	1.23E-02	0.00E+00	0.00E+00	1.15E-03	0.00E+00	1.11E-02	0.00E+00	3.40E-02	7.29E-03	6.58E-02	2.63E+02	2.50E-04	7.89E+02	8.34E-05	0.03%	0.08%
Sulfate	4.15E+01	mg/L	5.13E+01	mg/kg	1.38E+03	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	3.50E+00	0.00E+00	1.30E+00	0.00E+00	0.00E+00	4.19E-01	0.00E+00	1.17E+00	0.00E+00	3.61E+00	7.73E-01	1.08E+01	NA	NA	NA	NA	NA	NA
Thallium	5.86E-04	mg/L	4.92E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00							4.95E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.95E-05	7.40E-03	6.69E-03	7.40E-02	6.69E-04	0.83%	0.65%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.64E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.50E-07	0.00E+00	0.00E+00	2.43E-06	0.00E+00	9.96E-09	0.00E+00	5.46E-06	1.17E-06	9.32E-06	4.58E+00	2.03E-06	9.16E+00	1.02E-06	0.00%	0.00%
Vanadium	4.29E-02	mg/L	0.00E+00	mg/kg	1.45E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	3.62E-03	0.00E+00	1.37E-02	0.00E+00	0.00E+00	6.16E-04	0.00E+00	2.11E-04	0.00E+00	1.88E-03	4.02E-04	2.04E-02	2.10E-01	9.73E-02	2.10E+00	9.73E-03	12.06%	9.52%
Zinc	0.00E+00	mg/L	3.15E+01	mg/kg	4.80E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	6.34E+00	1.06E+00	8.84E-01	8.84E-01	1.84E-01	1.84E-01	0.00E+00	0.00E+00	4.54E-02	0.00E+00	0.00E+00	3.08E-01	0.00E+00	1.72E-01	0.00E+00	2.09E-01	4.47E-02	7.79E-01	1.60E+02	4.87E-03	3.20E+02	2.43E-03	0.60%	2.38%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	9.1E-06	4.6E-06	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	2.3E-04	4.6E-05	0.03%	0.05%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	7.1E-03	7.0E-04	0.87%	0.68%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	4.7E-04	5.0E-05	0.06%	0.05%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi \, x \, Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0.12	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0.03	unitless
Mammal diet fraction =	0.7	unitless
Bird diet fraction =	0.15	unitless
Soil ingestion rate =	0.004263	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.152	kg/d
Body weight =	4.5	kg
Home range =	2565	acres
Water intake rate =	0.38	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-115
Tier 1 COPCs
EEQs and Hazard Indices for the Muskrat at LHAAP
Low Impact Sub-Area/Harrison Bayou Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL		LOAEL		Percent Contribution to	Percent Contribution to
									-----Unitless-----							mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	EEQ N	mg/kg-d	EEQ L	EEQ N	EEQ L
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	9.44E-09	mg/L	1.41E-05	mg/kg	3.95E-06	mg/kg	#######	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	9.16E-10	9.73E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.12E-09	1.32E-10	2.12E-09	0.00E+00	0.00E+00	1.03E-07	1.00E-06	1.03E-01	1.00E-05	1.03E-02	0.24%	0.20%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.40E-03	mg/kg	#######		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.22E-07	0.00E+00	0.00E+00	0.00E+00	8.22E-07	8.00E-01	1.03E-06	4.00E+00	2.06E-07	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	4.30E-03	mg/kg	#######		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.96E-05	0.00E+00	0.00E+00	0.00E+00	1.96E-05	8.00E-01	2.44E-05	4.00E+00	4.89E-06	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.23E-03	mg/kg	#######		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.31E-06	0.00E+00	0.00E+00	0.00E+00	1.31E-06	8.00E-01	1.64E-06	4.00E+00	3.27E-07	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.87E-04	mg/kg	#######			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.30E-09	0.00E+00	0.00E+00	0.00E+00	9.30E-09	2.00E-01	4.65E-08	1.00E+00	9.30E-09	0.00%	0.00%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.76E-04	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E-07	0.00E+00	0.00E+00	0.00E+00	1.11E-07	4.58E+00	2.43E-08	9.16E+00	1.21E-08	0.00%	0.00%
Aluminum	2.03E+01	mg/L	1.03E+04	mg/kg	0.00E+00	mg/kg	#######	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	1.97E+00	7.09E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.81E-01	0.00E+00	7.81E-01	0.00E+00	0.00E+00	7.44E+01	1.93E+00	3.86E+01	1.93E+01	3.86E+00	88.47%	75.40%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	6.37E-01	mg/kg	#######			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.27E-04	0.00E+00	0.00E+00	0.00E+00	3.27E-04	1.25E-01	2.62E-03	1.25E+00	2.62E-04	0.01%	0.01%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.07E-03	mg/kg	#######			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.67E-06	0.00E+00	0.00E+00	0.00E+00	3.67E-06	6.85E-02	5.36E-05	6.85E-01	5.36E-06	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.42E-03	mg/kg	#######			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E-07	0.00E+00	0.00E+00	0.00E+00	1.05E-07	6.80E-02	1.55E-06	6.80E-01	1.55E-07	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.11E-03	mg/kg	#######		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.67E-07	0.00E+00	0.00E+00	0.00E+00	2.67E-07	6.80E-02	3.92E-06	6.80E-01	3.92E-07	0.00%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	7.47E-03	mg/kg	#######			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.49E-07	0.00E+00	0.00E+00	0.00E+00	2.49E-07	6.80E-02	3.66E-06	6.80E-01	3.66E-07	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.50E-04	mg/kg	#######			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.28E-06	0.00E+00	0.00E+00	0.00E+00	3.28E-06	6.80E-02	4.82E-05	6.80E-01	4.82E-06	0.00%	0.00%
Barium	0.00E+00	mg/L	2.86E+02	mg/kg	0.00E+00	mg/kg	#######	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	1.98E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.70E+00	0.00E+00	8.70E+00	0.00E+00	0.00E+00	1.94E+01	5.10E+00	3.80E+00	1.98E+01	9.78E-01	8.71%	19.13%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	6.80E-02	mg/kg	#######			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.60E-03	0.00E+00	0.00E+00	0.00E+00	1.60E-03	4.00E+00	4.01E-04	4.00E+01	4.01E-05	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.82E-01	mg/kg	0.00E+00	mg/kg	#######	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	0.00E+00	1.94E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.46E-05	0.00E+00	1.46E-05	0.00E+00	0.00E+00	1.97E-03	1.83E+01	1.08E-04	1.83E+02	1.08E-05	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	mg/L	1.83E-01	mg/kg	3.84E-01	mg/kg	#######	1.63E+03	7.99E+00	2.58E+01	1.33E+00	9.52E-01	1.33E+00	9.22E-01	9.22E-01	0.00E+00	1.26E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.02E-03	2.68E-03	8.02E-03	0.00E+00	0.00E+00	2.00E-02	1.00E+00	2.00E-02	1.00E+01	2.00E-03	0.05%	0.04%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.88E-04	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.55E-08	0.00E+00	0.00E+00	0.00E+00	5.55E-08	4.58E+00	1.21E-08	9.16E+00	6.05E-09	0.00%	0.00%
Chromium	1.27E-02	mg/L	0.00E+00	mg/kg	1.22E+01	mg/kg	#######	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	1.23E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.31E-02	0.00E+00	0.00E+00	0.00E+00	4.43E-02	3.28E+00	1.35E-02	1.31E+01	3.37E-03	0.03%	0.07%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-04	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.32E-08	0.00E+00	0.00E+00	0.00E+00	7.32E-08	4.58E+00	1.60E-08	9.16E+00	7.99E-09	0.00%	0.00%
Copper	1.69E-02	mg/L	7.78E+00	mg/kg	7.43E+00	mg/kg	#######	5.92E+03	5.25E+00	1.32E+00	5.59E-01	5.75E-01	5.59E-01	1.49E-01	1.49E-01	1.64E-03	5.36E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.44E-01	3.13E-02	1.44E-01	0.00E+00	0.00E+00	3.74E-01	1.17E+01	3.19E-02	1.51E+01	2.47E-02	0.07%	0.48%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.86E-04	mg/kg	#######		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.23E-06	0.00E+00	0.00E+00	0.00E+00	2.23E-06	2.00E-02	1.12E-04	2.00E-01	1.12E-05	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.75E-04	mg/kg	#######			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.72E-08	0.00E+00	0.00E+00	0.00E+00	7.72E-08	9.20E-02	8.39E-07	9.20E-01	8.39E-08	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.20E-04	mg/kg	#######			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.05E-08	0.00E+00	0.00E+00	0.00E+00	3.05E-08	8.00E-02	3.81E-07	2.90E-01	1.05E-07	0.00%	0.00%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	2.91E+01	mg/L	0.00E+00	mg/kg	1.00E+04	mg/kg	#######	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	2.83E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.94E-01	0.00E+00	0.00E+00	0.00E+00	3.12E+00	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	7.24E-03	mg/L	0.00E+00	mg/kg	2.51E+01	mg/kg	#######	1.50E+03	6.07E-01	4.39E-01	NA	6.40E-02	NA	1.33E-02	1.33E-02	7.03E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	1.18E-02	NA	0.00E+00	0.00E+00	1.25E-02	8.00E+00	1.56E-03	8.00E+01	1.56E-04	0.00%	0.00%
Manganese	9.37E-01	mg/L	0.00E+00	mg/kg	9.35E+02	mg/kg	#######	2.00E+03	2.10E+00	2.21E-01	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	9.10E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.86E-01	0.00E+00	0.00E+00	0.00E+00	7.77E-01	8.80E+01	8.83E-03	2.84E+02	2.74E-03	0.02%	0.05%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.95E-02	mg/kg	#######		2.87E+00	7.16E+00	NA	1.35E+00	NA	1.03E-01	1.03E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	5.88E-04	NA	0.00E+00	0.00E+00	5.88E-04	1.32E+01	4.45E-05	3.96E+01	1.48E-05	0.00%	0.00%
Mercury (methyl)	0.00E+00	mg/L	8.29E-02	mg/kg	0.00E+00	mg/kg	#######		2.87E+00	NA	1.16E+00	NA	1.16E+00			0.00E+00	5.71E-04	0.00E+00	0.00E+00	0.00E+00	NA	3.16E-03	NA	3.16E-03	0.00E+00	0.00E+00	6.90E-03	3.20E-02	2.16E-01	1.60E-01	4.31E-02	0.49%	0.84%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.41E-04	mg/kg	#######			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.60E-08	0.00E+00	0.00E+00	0.00E+00	8.60E-08	7.00E-02	1.23E-06	7.00E-01	1.23E-07	0.00%	0.00%
Nickel	0.00E+00	mg/L	1.10E+01	mg/kg	7.10E+00	mg/kg	#######		2.32E+00	4.73E+00	5.96E-02	6.65E-02	6.65E-02	1.01E-01	1.01E-01	0.00E+00	7.58E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.16E-02	3.47E-03	2.41E-02	0.00E+00	0.00E+00	1.25E-01	4.00E+01	3.13E-03	8.00E+01	1.56E-03	0.01%	0.03%
Nitrate	7.46E-01	mg/L	7.48E-01	mg/kg	0.00E+00	mg/kg	#######	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	7.24E-02	5.16E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.64E-03	0.00E+00	8.64E-03	0.00E+00	0.00E+00	9.49E-02	5.07E+02	1.87E-04	1.13E+03	8.39E-05	0.00%	0.00%
Nitrate/Nitrite	5.84E+01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	1.07E+03								5.67E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.67E+00	5.07E+02	1.12E-02	1.13E+03	5.02E-03	0.03%	0.10%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	#######			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.40E-08	0.00E+00	0.00E+00	0.00E+00	3.40E-08	4.58E+00	7.42E-09	9.16E+00	3.71E-09	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	8.83E-04	mg/kg	#######			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.17E-07	0.00E+00	0.00E+00	0.00E+00	2.17E-07	2.40E-01	9.03E-07	2.40E+00	9.03E-08	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	4.23E-01	mg/kg	#######			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.19E-04	0.00E+00	0.00E+00	0.00E+00	2.19E-04	2.40E-01	9.11E-04	2.40E+00	9.11E-05	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.80E-01	mg/kg	#######			1.14E+00	NA	1.88E+01	1.88E+01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	3.86E-02	0.00E+00	0.00E+00	0.00E+00	3.86E-02	8.50E+00	4.54E-03	2.55E+01	1.51E-03	0.01%	0.03%
Selenium	4.63E-03	mg/L	9.08E-01	mg/kg	4.13E-01	mg/kg	#######	2.05E+02	4.50E+00	1.18E+00	5.02E-01	4.64E-01	5.02E-01	1.95E-01	1.95E-01	4.49E-04	6.26E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.50E-02	1.40E-03	1.50E-02	0.00E+00	0.00E+00	3.82E-02	2.00E-01	1.91E-01	3.30E-01	1.16E-01	0.44%	2.26%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+01	mg/kg	#######		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.66E-02	0.00E+00	0.00E+00	0.00E+00	3.66E-02	2.63E+02	1.39E-04	7.89E+02	4.64E-05	0.00%	0.00%
Sulfate	5.76E+01	mg/L	7.51E+01	mg/kg	2.30E+02	mg/kg	#######	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	5.59E+00	5.18E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.68E-01	5.90E-01	8.68E-01	0.00E+00	0.00E+00	8.44E+00	NA	NA	NA	NA	NA	NA
Thallium	7.55E-04	mg/L	6.00E-01	mg/kg	0.00E+00	mg/kg	#######	1.59E+04	4.50E+00							7.33E-05	4.13E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.21E-03	7.40E-03	5.68E-01	7.40E-02	5.68E-02	1.30%	1.11%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.04E-04	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.98E-08	0.00E+00	0.00E+00	0.00E+00	8.98E-08	4.58E+00	1.96E-08	9.16E+00	9.80E-09	0.00%	0.00%
Vanadium	6.18E-02	mg/L	0.00E+00	mg/kg	1.53E+01	mg/kg	#######	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	6.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.50E-04	0.00E+00	0.00E+00	0.00E+00	6.45E-03	2.10E-01	3.07E-02	2.10E+00	3.07E-03	0.07%	0.06%
Zinc	0.00E+00	mg/L	3.58E+01	mg/kg	5.89E+01	mg/kg	#######	5.00E+03	7.53E+00	5.53E+00	1.01E+00	8.08E-01	1.01E+00	4.51E-01	4.51E-01	0.00E+00	2.47E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.19E+00	3.49E-01	1.19E+00	0.00E+00	0.00E+00	2.97E+00	1.60E+02	1.86E-02	3.20E+02	9.28E-03	0.04%	0.18%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	7.9E-08	4.0E-08	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	2.7E-05	5.4E-06	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.1E-04	1.1E-05	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	1.1E-04	1.1E-05	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	1.1E-04	1.1E-05	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text tables.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0.1	unitless	(a)
Aquatic plant diet fraction =	0.45	unitless	(a, b)
Plant root diet fraction =	0.45	unitless	(a, b)
Fish diet fraction =	0	unitless	
Aq. Invert diet fraction =	0	unitless	
Terr. Invert diet fraction =	0	unitless	
Mammal diet fraction =	0	unitless	
Bird diet fraction =	0	unitless	
Soil ingestion rate =	0	kg/d	
Sediment ingestion rate =	0.008093	kg/d	
Food ingestion rate =	0.0861	kg/d	
Body weight =	1.174	kg	
Home range =	0.11861	acres	
Water intake rate =	0.114	L/d	
Site Area =	475	acres	
Area Use Factor (AUF) =	1	unitless	
Exposure Duration (ED) =	1	unitless	

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Table E-116
Tier 2 COPCs
EEQs and Hazard Indices for the Muskrat at LHAAP
Low Impact Sub-Area/Harrison Bayou Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
									----------Unitless----------							mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	8.00E-09	mg/L	4.00E-06	mg/kg	3.18E-06	mg/kg	#######	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	7.77E-10	2.76E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.12E-10	9.04E-11	5.12E-10	0.00E+00	0.00E+00	2.95E-08	1.00E-06	2.95E-02	1.00E-05	2.95E-03	0.10%	0.09%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	8.00E-04	mg/kg	#######		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.64E-07	0.00E+00	0.00E+00	0.00E+00	1.64E-07	8.00E-01	2.05E-07	4.00E+00	4.11E-08	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	3.10E-03	mg/kg	#######		4.75E+00	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.09E-06	0.00E+00	0.00E+00	0.00E+00	3.09E-06	8.00E-01	3.87E-06	4.00E+00	7.73E-07	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.07E-03	mg/kg	#######		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.19E-07	0.00E+00	0.00E+00	0.00E+00	2.19E-07	8.00E-01	2.74E-07	4.00E+00	5.48E-08	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	#######			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.27E-09	0.00E+00	0.00E+00	0.00E+00	6.27E-09	2.00E-01	3.14E-08	1.00E+00	6.27E-09	0.00%	0.00%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.15E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.16E-08	0.00E+00	0.00E+00	0.00E+00	2.16E-08	4.58E+00	4.71E-09	9.16E+00	2.35E-09	0.00%	0.00%
Aluminum	1.12E+01	mg/L	7.50E+03	mg/kg	0.00E+00	mg/kg	#######	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	1.09E+00	5.17E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.71E-01	0.00E+00	3.71E-01	0.00E+00	0.00E+00	5.35E+01	1.93E+00	2.77E+01	1.93E+01	2.77E+00	94.14%	86.68%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-01	mg/kg	#######			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.38E-04	0.00E+00	0.00E+00	0.00E+00	1.38E-04	1.25E-01	1.11E-03	1.25E+00	1.11E-04	0.00%	0.00%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.55E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.57E-07	0.00E+00	0.00E+00	0.00E+00	1.57E-07	6.85E-02	2.29E-06	6.85E-01	2.29E-07	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.21E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.43E-08	0.00E+00	0.00E+00	0.00E+00	7.43E-08	6.80E-02	1.09E-06	6.80E-01	1.09E-07	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	3.32E-03	mg/kg	#######		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.70E-08	0.00E+00	0.00E+00	0.00E+00	8.70E-08	6.80E-02	1.28E-06	6.80E-01	1.28E-07	0.00%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	4.07E-03	mg/kg	#######			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.92E-08	0.00E+00	0.00E+00	0.00E+00	1.92E-08	6.80E-02	2.82E-07	6.80E-01	2.82E-08	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	7.92E-04	mg/kg	#######			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.06E-06	0.00E+00	0.00E+00	0.00E+00	3.06E-06	6.80E-02	4.50E-05	6.80E-01	4.50E-06	0.00%	0.00%
Barium	0.00E+00	mg/L	2.32E+02	mg/kg	0.00E+00	mg/kg	#######	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	1.60E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.19E+00	0.00E+00	1.19E+00	0.00E+00	0.00E+00	3.98E+00	5.10E+00	7.81E-01	1.98E+01	2.01E-01	2.65%	6.28%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	5.10E-02	mg/kg	#######			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E-03	0.00E+00	0.00E+00	0.00E+00	1.20E-03	4.00E+00	3.01E-04	4.00E+01	3.01E-05	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.33E-01	mg/kg	0.00E+00	mg/kg	#######	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	0.00E+00	1.60E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.21E-06	0.00E+00	4.21E-06	0.00E+00	0.00E+00	1.61E-03	1.83E+01	8.80E-05	1.83E+02	8.81E-06	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	mg/L	1.83E-01	mg/kg	3.02E-01	mg/kg	#######	1.15E+03	6.00E-01	2.87E+01	1.33E+00	1.06E+00	1.33E+00	6.72E-01	6.72E-01	0.00E+00	1.26E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.02E-03	2.35E-03	8.02E-03	0.00E+00	0.00E+00	1.97E-02	1.00E+00	1.97E-02	1.00E+01	1.97E-03	0.07%	0.06%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.18E-08	0.00E+00	0.00E+00	0.00E+00	1.18E-08	4.58E+00	2.58E-09	9.16E+00	1.29E-09	0.00%	0.00%
Chromium	9.95E-03	mg/L	0.00E+00	mg/kg	1.10E+01	mg/kg	#######	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	9.66E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.31E-03	0.00E+00	0.00E+00	0.00E+00	4.28E-03	3.28E+00	1.31E-03	1.31E+01	3.26E-04	0.00%	0.01%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.45E-08	0.00E+00	0.00E+00	0.00E+00	1.45E-08	4.58E+00	3.17E-09	9.16E+00	1.58E-09	0.00%	0.00%
Copper	1.19E-02	mg/L	6.82E+00	mg/kg	6.53E+00	mg/kg	#######	1.11E+03	1.56E+00	1.45E+00	6.06E-01	6.22E-01	6.06E-01	8.97E-02	8.97E-02	1.15E-03	4.70E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E-01	2.98E-02	1.36E-01	0.00E+00	0.00E+00	3.51E-01	1.17E+01	3.00E-02	1.51E+01	2.32E-02	0.10%	0.72%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.72E-04	mg/kg	#######		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.03E-08	0.00E+00	0.00E+00	0.00E+00	3.03E-08	2.00E-02	1.51E-06	2.00E-01	1.51E-07	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-04	mg/kg	#######			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.78E-08	0.00E+00	0.00E+00	0.00E+00	4.78E-08	9.20E-02	5.20E-07	9.20E-01	5.20E-08	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.93E-04	mg/kg	#######			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.25E-08	0.00E+00	0.00E+00	0.00E+00	2.25E-08	8.00E-02	2.81E-07	2.90E-01	7.76E-08	0.00%	0.00%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	1.61E+01	mg/L	0.00E+00	mg/kg	9.10E+03	mg/kg	#######	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	1.57E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.67E-01	0.00E+00	0.00E+00	0.00E+00	1.83E+00	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	5.66E-03	mg/L	0.00E+00	mg/kg	2.21E+01	mg/kg	#######	4.48E+02	7.10E-02	4.50E-01	NA	6.78E-02	NA	1.16E-02	1.16E-02	5.50E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	1.10E-02	NA	0.00E+00	0.00E+00	1.15E-02	8.00E+00	1.44E-03	8.00E+01	1.44E-04	0.00%	0.00%
Manganese	6.92E-01	mg/L	0.00E+00	mg/kg	8.30E+02	mg/kg	#######	2.50E+02	4.20E-01	2.26E-01	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	6.72E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.81E-01	0.00E+00	0.00E+00	0.00E+00	5.48E-01	8.80E+01	6.23E-03	2.84E+02	1.93E-03	0.02%	0.06%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-02	mg/kg	#######		1.14E+00	7.64E+00	NA	1.41E+00	NA	9.15E-02	9.15E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	5.58E-04	NA	0.00E+00	0.00E+00	5.58E-04	1.32E+01	4.23E-05	3.96E+01	1.41E-05	0.00%	0.00%
Mercury (methyl)	0.00E+00	mg/L	6.13E-02	mg/kg	0.00E+00	mg/kg	#######		1.14E+00	NA	1.33E+00	NA	1.33E+00			0.00E+00	4.22E-04	0.00E+00	0.00E+00	0.00E+00	NA	2.69E-03	NA	2.69E-03	0.00E+00	0.00E+00	5.80E-03	3.20E-02	1.81E-01	1.60E-01	3.62E-02	0.61%	1.13%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.88E-04	mg/kg	#######			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.27E-09	0.00E+00	0.00E+00	0.00E+00	7.27E-09	7.00E-02	1.04E-07	7.00E-01	1.04E-08	0.00%	0.00%
Nickel	0.00E+00	mg/L	9.70E+00	mg/kg	6.36E+00	mg/kg	#######		4.86E-01	1.06E+00	6.15E-02	6.84E-02	6.84E-02	8.71E-02	8.71E-02	0.00E+00	6.69E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.97E-02	3.19E-03	2.19E-02	0.00E+00	0.00E+00	1.12E-01	4.00E+01	2.79E-03	8.00E+01	1.40E-03	0.01%	0.04%
Nitrate	4.32E-01	mg/L	4.60E-01	mg/kg	0.00E+00	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	4.19E-02	3.17E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.19E-03	0.00E+00	3.19E-03	0.00E+00	0.00E+00	5.15E-02	5.07E+02	1.01E-04	1.13E+03	4.55E-05	0.00%	0.00%
Nitrate/Nitrite	2.93E+01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	3.01E+02								2.84E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.84E+00	5.07E+02	5.61E-03	1.13E+03	2.52E-03	0.02%	0.08%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E-04	mg/kg	#######			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.30E-08	0.00E+00	0.00E+00	0.00E+00	3.30E-08	4.58E+00	7.19E-09	9.16E+00	3.60E-09	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.62E-04	mg/kg	#######			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-07	0.00E+00	0.00E+00	0.00E+00	1.13E-07	2.40E-01	4.71E-07	2.40E+00	4.71E-08	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-01	mg/kg	#######			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.72E-05	0.00E+00	0.00E+00	0.00E+00	7.72E-05	2.40E-01	3.22E-04	2.40E+00	3.22E-05	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	7.70E-02	mg/kg	#######			3.00E-01	NA	3.19E+01	3.19E+01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	1.80E-02	0.00E+00	0.00E+00	0.00E+00	1.80E-02	8.50E+00	2.12E-03	2.55E+01	7.07E-04	0.01%	0.02%
Selenium	3.90E-03	mg/L	7.65E-01	mg/kg	3.74E-01	mg/kg	#######	2.05E+02	4.50E+00	1.21E+00	4.93E-01	4.59E-01	4.93E-01	1.51E-01	1.51E-01	3.79E-04	5.27E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-02	1.26E-03	1.25E-02	0.00E+00	0.00E+00	3.18E-02	2.00E-01	1.59E-01	3.30E-01	9.64E-02	0.54%	3.01%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.30E+01	mg/kg	#######		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-02	0.00E+00	0.00E+00	0.00E+00	2.00E-02	2.63E+02	7.61E-05	7.89E+02	2.54E-05	0.00%	0.00%
Sulfate	4.15E+01	mg/L	5.13E+01	mg/kg	1.30E+02	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	4.03E+00	3.53E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.55E-01	2.00E-01	3.55E-01	0.00E+00	0.00E+00	5.29E+00	NA	NA	NA	NA	NA	NA
Thallium	5.86E-04	mg/L	4.92E-01	mg/kg	0.00E+00	mg/kg	#######	7.50E+01	4.50E+00							5.69E-05	3.39E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.45E-03	7.40E-03	4.66E-01	7.40E-02	4.66E-02	1.58%	1.46%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.73E-08	0.00E+00	0.00E+00	0.00E+00	1.73E-08	4.58E+00	3.77E-09	9.16E+00	1.89E-09	0.00%	0.00%
Vanadium	4.29E-02	mg/L	0.00E+00	mg/kg	1.45E+01	mg/kg	#######	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	4.16E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.82E-04	0.00E+00	0.00E+00	0.00E+00	4.54E-03	2.10E-01	2.16E-02	2.10E+00	2.16E-03	0.07%	0.07%
Zinc	0.00E+00	mg/L	3.15E+01	mg/kg	4.79E+01	mg/kg	#######	2.91E+03	1.94E+00	6.34E+00	1.06E+00	8.84E-01	1.06E+00	1.84E-01	1.84E-01	0.00E+00	2.17E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E+00	3.11E-01	1.11E+00	0.00E+00	0.00E+00	2.74E+00	1.60E+02	1.71E-02	3.20E+02	8.57E-03	0.06%	0.27%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	2.1E-08	1.1E-08	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	4.3E-06	8.7E-07	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	5.0E-05	5.0E-06	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	8.8E-05	8.8E-06	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	2.1E-06	2.1E-07	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0.1	unitless
Aquatic plant diet fraction =	0.45	unitless
Plant root diet fraction =	0.45	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0.008093	kg/d
Food ingestion rate =	0.0861	kg/d
Body weight =	1.174	kg
Home range =	0.33112	acres
Water intake rate =	0.114	L/d
Site Area =	475	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-117
Tier 1 COPCs
EEQs and Hazard Indices for the River Otter at LHAAP
Low Impact Sub-Area/Harrison Bayou Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							--Unitless--									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	9.44E-09	mg/L	1.41E-05	mg/kg	3.95E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	4.98E-10	5.68E-09	0.00E+00	4.47E-05	4.78E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.72E-10	4.52E-05	1.00E-06	4.52E+01	1.00E-05	4.52E+00	30.97%	27.76%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.40E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-06	2.50E-06	8.00E-01	3.12E-06	4.00E+00	6.25E-07	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	4.30E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.61E-06	6.61E-06	8.00E-01	8.27E-06	4.00E+00	1.65E-06	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.23E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.73E-06	5.73E-06	8.00E-01	7.17E-06	4.00E+00	1.43E-06	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.87E-04	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.34E-07	3.34E-07	2.00E-01	1.67E-06	1.00E+00	3.34E-07	0.00%	0.00%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.76E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.71E-07	6.71E-07	4.58E+00	1.47E-07	9.16E+00	7.33E-08	0.00%	0.00%
Aluminum	2.03E+01	mg/L	1.03E+04	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	1.07E+00	4.14E+00	0.00E+00	2.43E+00	7.16E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.93E+01	1.93E+00	4.11E+01	1.93E+01	4.11E+00	28.15%	25.24%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	6.37E-01	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.64E-04	1.64E-04	1.25E-01	1.31E-03	1.25E+00	1.31E-04	0.00%	0.00%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.07E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.47E-06	5.47E-06	6.85E-02	7.99E-05	6.85E-01	7.99E-06	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.42E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.53E-06	2.53E-06	6.80E-02	3.72E-05	6.90E-01	3.67E-06	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.11E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.75E-06	6.75E-06	6.80E-02	9.93E-05	6.90E-01	9.79E-06	0.00%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	7.47E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.22E-05	2.22E-05	6.80E-02	3.26E-04	6.90E-01	3.21E-05	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.50E-04	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E-06	1.52E-06	6.80E-02	2.23E-05	6.90E-01	2.20E-06	0.00%	0.00%
Barium	0.00E+00	mg/L	2.86E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	1.15E-01	0.00E+00	0.00E+00	2.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.11E+00	5.10E+00	4.14E-01	1.98E+01	1.07E-01	0.28%	0.66%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	6.80E-02	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.21E-04	1.21E-04	4.00E+00	3.03E-05	4.00E+01	3.03E-06	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.82E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	0.00E+00	1.13E-04	0.00E+00	0.00E+00	9.54E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.66E-03	1.83E+01	5.27E-04	1.83E+02	5.28E-05	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	mg/L	1.83E-01	mg/kg	3.84E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.58E+01	1.33E+00	9.52E-01	9.52E-01	9.22E-01	9.22E-01	0.00E+00	7.36E-05	0.00E+00	0.00E+00	2.26E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.48E-04	2.88E-03	1.00E+00	2.88E-03	1.00E+01	2.88E-04	0.00%	0.00%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.88E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.34E-07	3.34E-07	4.58E+00	7.30E-08	9.16E+00	3.65E-08	0.00%	0.00%
Chromium	1.27E-02	mg/L	0.00E+00	mg/kg	1.22E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	6.69E-04	0.00E+00	0.00E+00	3.53E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.32E-03	3.60E-01	3.28E+00	1.10E-01	1.31E+01	2.74E-02	0.08%	0.17%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.42E-07	4.42E-07	4.58E+00	9.64E-08	9.16E+00	4.82E-08	0.00%	0.00%
Copper	1.69E-02	mg/L	7.78E+00	mg/kg	7.43E+00	mg/kg	1.00E+00	5.92E+03	5.25E+00	1.32E+00	5.59E-01	5.75E-01	5.75E-01	1.49E-01	1.49E-01	8.92E-04	3.13E-03	0.00E+00	2.78E+00	6.32E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.72E-03	2.85E+00	1.17E+01	2.44E-01	1.51E+01	1.88E-01	0.17%	1.16%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.86E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.31E-07	3.31E-07	2.00E-02	1.65E-05	2.00E-01	1.65E-06	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.75E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.18E-07	5.18E-07	9.20E-02	5.64E-06	9.20E-01	5.64E-07	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.20E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.93E-07	3.93E-07	8.00E-02	4.91E-06	2.90E-01	1.36E-06	0.00%	0.00%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	2.91E+01	mg/L	0.00E+00	mg/kg	1.00E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	1.54E+00	0.00E+00	0.00E+00	8.11E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.21E-02	8.12E+02	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	7.24E-03	mg/L	0.00E+00	mg/kg	2.51E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	4.39E-01	NA	6.40E-02	6.40E-02	1.33E-02	1.33E-02	3.82E-04	0.00E+00	0.00E+00	3.03E-01	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	5.17E-04	3.04E-01	8.00E+00	3.79E-02	8.00E+01	3.79E-03	0.03%	0.02%
Manganese	9.37E-01	mg/L	0.00E+00	mg/kg	9.35E+02	mg/kg	1.00E+00	2.00E+03	2.10E+00	2.21E-01	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	4.95E-02	0.00E+00	0.00E+00	5.22E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.39E-02	5.23E+01	8.80E+01	5.94E-01	2.84E+02	1.84E-01	0.41%	1.13%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.95E-02	mg/kg	1.00E+00		2.87E+00	7.16E+00	NA	1.35E+00	1.35E+00	1.03E-01	1.03E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	9.49E-06	9.49E-06	1.00E+00	9.49E-06	3.00E+00	3.16E-06	0.00%	0.00%
Mercury (methyl)	0.00E+00	mg/L	8.29E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.16E+00	NA	NA			0.00E+00	3.34E-05	0.00E+00	0.00E+00	3.68E-04	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	4.01E-04	1.50E-02	2.68E-02	2.50E-02	1.61E-02	0.02%	0.10%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.41E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.09E-07	6.09E-07	7.00E-02	8.70E-06	7.00E-01	8.70E-07	0.00%	0.00%
Nickel	0.00E+00	mg/L	1.10E+01	mg/kg	7.10E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	5.96E-02	6.65E-02	6.65E-02	1.01E-01	1.01E-01	0.00E+00	4.42E-03	0.00E+00	0.00E+00	3.95E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E-03	4.50E-02	4.00E+01	1.12E-03	8.00E+01	5.62E-04	0.00%	0.00%
Nitrate	7.46E-01	mg/L	7.48E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	3.94E-02	3.01E-04	0.00E+00	2.22E+01	2.43E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.22E+01	5.07E+02	4.38E-02	1.13E+03	1.97E-02	0.03%	0.12%
Nitrate/Nitrite	5.84E+01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03								3.08E+00	0.00E+00	0.00E+00	1.74E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E+03	5.07E+02	3.43E+00	1.13E+03	1.54E+00	2.35%	9.47%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.14E-07	3.14E-07	4.58E+00	6.85E-08	9.16E+00	3.42E-08	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	8.83E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.57E-06	1.57E-06	2.40E-01	6.56E-06	2.40E+00	6.56E-07	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	4.23E-01	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.54E-04	7.54E-04	2.40E-01	3.14E-03	2.40E+00	3.14E-04	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.80E-01	mg/kg	1.00E+00			1.14E+00	NA	1.88E+01	1.88E+01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	7.20E-05	7.20E-05	8.50E+00	8.47E-06	2.55E+01	2.82E-06	0.00%	0.00%
Selenium	4.63E-03	mg/L	9.08E-01	mg/kg	4.13E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.18E+00	5.02E-01	4.64E-01	4.64E-01	1.95E-01	1.95E-01	2.44E-04	3.65E-04	0.00E+00	2.64E-02	6.32E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.24E-04	3.35E-02	2.00E-01	1.67E-01	3.30E-01	1.01E-01	0.11%	0.62%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.67E-03	3.67E-03	2.63E+02	1.40E-05	7.89E+02	4.65E-06	0.00%	0.00%
Sulfate	5.76E+01	mg/L	7.51E+01	mg/kg	2.30E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	3.04E+00	3.02E-02	0.00E+00	1.71E+03	2.44E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.92E-02	1.72E+03	NA	NA	NA	NA	NA	NA
Thallium	7.55E-04	mg/L	6.00E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00							3.98E-05	2.41E-04	0.00E+00	3.34E-01	4.17E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.39E-01	7.40E-03	4.58E+01	7.40E-02	4.58E+00	31.39%	28.14%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.04E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.41E-07	5.41E-07	4.58E+00	1.18E-07	9.16E+00	5.91E-08	0.00%	0.00%
Vanadium	6.18E-02	mg/L	0.00E+00	mg/kg	1.53E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	3.26E-03	0.00E+00	0.00E+00	1.84E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.41E-04	1.84E+00	2.10E-01	8.77E+00	2.10E+00	8.77E-01	6.01%	5.39%
Zinc	0.00E+00	mg/L	3.58E+01	mg/kg	5.89E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.53E+00	1.01E+00	8.08E-01	8.08E-01	4.51E-01	4.51E-01	0.00E+00	1.44E-02	0.00E+00	0.00E+00	4.17E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.11E-02	4.72E-01	1.60E+02	2.95E-03	3.20E+02	1.48E-03	0.00%	0.01%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	5.0E-07	2.5E-07	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	1.9E-05	3.7E-06	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	5.6E-04	5.6E-05	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	5.3E-04	5.3E-05	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	2.4E-05	2.6E-06	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\,x\,Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text tables.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.9	unitless
Aq. Invert diet fraction =	0.05	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0.05	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0.00494	kg/d
Food ingestion rate =	0.38	kg/d
Body weight =	8	kg
Home range =	729	acres
Water intake rate =	0.648	L/d
Site Area =	475	acres
Area Use Factor (AUF) =	0.651578	unitless
Exposure Duration (ED) =	1	unitless

Table E-118
Tier 2 COPCs
EEQs and Hazard Indices for the River Otter at LHAAP
Low Impact Sub-Area/Harrison Bayou Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							-------	-------	-------	-------Unitless	-------	-------	-------	-------		mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	8.00E-09	mg/L	4.00E-06	mg/kg	3.18E-06	mg/kg	#######	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	3.12E-10	1.19E-09	0.00E+00	3.80E-06	2.13E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.72E-10	3.82E-06	1.00E-06	3.82E+00	1.00E-05	3.82E-01	13.51%	12.41%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	8.00E-04	mg/kg	#######		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.01E-07	8.01E-07	8.00E-01	1.00E-06	4.00E+00	2.00E-07	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	3.10E-03	mg/kg	#######		4.75E+00	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.33E-06	3.33E-06	8.00E-01	4.17E-06	4.00E+00	8.34E-07	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.07E-03	mg/kg	#######		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.08E-06	1.08E-06	8.00E-01	1.35E-06	4.00E+00	2.70E-07	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	#######			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.76E-07	1.76E-07	2.00E-01	8.81E-07	1.00E+00	1.76E-07	0.00%	0.00%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.15E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.15E-07	3.15E-07	4.58E+00	6.89E-08	9.16E+00	3.44E-08	0.00%	0.00%
Aluminum	1.12E+01	mg/L	7.50E+03	mg/kg	0.00E+00	mg/kg	#######	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	4.37E-01	2.23E+00	0.00E+00	9.92E-01	3.85E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.22E+01	1.93E+00	2.19E+01	1.93E+01	2.19E+00	77.37%	71.06%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-01	mg/kg	#######			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.44E-05	6.44E-05	1.25E-01	5.15E-04	1.25E+00	5.15E-05	0.00%	0.00%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.55E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.55E-06	2.55E-06	6.85E-02	3.73E-05	6.85E-01	3.73E-06	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.21E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.21E-06	1.21E-06	6.80E-02	1.78E-05	6.90E-01	1.75E-06	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	3.32E-03	mg/kg	#######		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.89E-06	1.89E-06	6.80E-02	2.77E-05	6.90E-01	2.73E-06	0.00%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	4.07E-03	mg/kg	#######			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.77E-06	7.77E-06	6.80E-02	1.14E-04	6.90E-01	1.13E-05	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	7.92E-04	mg/kg	#######			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.93E-07	7.93E-07	6.80E-02	1.17E-05	6.90E-01	1.15E-06	0.00%	0.00%
Barium	0.00E+00	mg/L	2.32E+02	mg/kg	0.00E+00	mg/kg	#######	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	6.87E-02	0.00E+00	0.00E+00	1.19E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.26E+00	5.10E+00	2.47E-01	1.98E+01	6.36E-02	0.87%	2.07%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	5.10E-02	mg/kg	#######			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E-05	5.10E-05	4.00E+00	1.28E-05	4.00E+01	1.28E-06	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.33E-01	mg/kg	0.00E+00	mg/kg	#######	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	0.00E+00	6.91E-05	0.00E+00	0.00E+00	1.24E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.31E-03	1.83E+01	7.14E-05	1.83E+02	7.16E-06	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	mg/L	1.83E-01	mg/kg	3.02E-01	mg/kg	#######	1.15E+03	6.00E-01	2.87E+01	1.33E+00	1.06E+00	1.06E+00	6.72E-01	6.72E-01	0.00E+00	5.43E-05	0.00E+00	0.00E+00	1.25E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.32E-04	4.12E-04	1.00E+00	4.12E-04	1.00E+01	4.12E-05	0.00%	0.00%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.73E-07	1.73E-07	4.58E+00	3.78E-08	9.16E+00	1.89E-08	0.00%	0.00%
Chromium	9.95E-03	mg/L	0.00E+00	mg/kg	1.10E+01	mg/kg	#######	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	3.87E-04	0.00E+00	0.00E+00	7.36E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.06E-03	7.51E-02	3.28E+00	2.29E-02	1.31E+01	5.71E-03	0.08%	0.19%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.12E-07	2.12E-07	4.58E+00	4.63E-08	9.16E+00	2.32E-08	0.00%	0.00%
Copper	1.19E-02	mg/L	6.82E+00	mg/kg	6.53E+00	mg/kg	#######	1.11E+03	1.56E+00	1.45E+00	6.06E-01	6.22E-01	6.22E-01	8.97E-02	8.97E-02	4.62E-04	2.02E-03	0.00E+00	2.71E-01	1.21E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.69E-04	2.86E-01	1.17E+01	2.45E-02	1.51E+01	1.89E-02	0.09%	0.61%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.72E-04	mg/kg	#######		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.72E-07	1.72E-07	2.00E-02	8.60E-06	2.00E-01	8.60E-07	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-04	mg/kg	#######			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.30E-07	3.30E-07	9.20E-02	3.58E-06	9.20E-01	3.58E-07	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.93E-04	mg/kg	#######			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.93E-07	1.93E-07	8.00E-02	2.42E-06	2.90E-01	6.66E-07	0.00%	0.00%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	1.61E+01	mg/L	0.00E+00	mg/kg	9.10E+03	mg/kg	#######	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	6.29E-01	0.00E+00	0.00E+00	8.29E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E-02	8.36E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	5.66E-03	mg/L	0.00E+00	mg/kg	2.21E+01	mg/kg	#######	4.48E+02	7.10E-02	4.50E-01	NA	6.78E-02	6.78E-02	1.16E-02	1.16E-02	2.20E-04	0.00E+00	0.00E+00	5.21E-02	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	2.94E-04	5.26E-02	8.00E+00	6.58E-03	8.00E+01	6.58E-04	0.02%	0.02%
Manganese	6.92E-01	mg/L	0.00E+00	mg/kg	8.30E+02	mg/kg	#######	2.50E+02	4.20E-01	2.26E-01	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	2.69E-02	0.00E+00	0.00E+00	3.55E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.18E-03	3.59E+00	8.80E+01	4.08E-02	2.84E+02	1.26E-02	0.14%	0.41%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-02	mg/kg	#######		1.14E+00	7.64E+00	NA	1.41E+00	1.41E+00	9.15E-02	9.15E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	5.64E-06	5.64E-06	1.00E+00	5.64E-06	3.00E+00	1.88E-06	0.00%	0.00%
Mercury (methyl)	0.00E+00	mg/L	6.13E-02	mg/kg	0.00E+00	mg/kg	#######		1.14E+00	NA	1.33E+00	NA	NA			0.00E+00	1.82E-05	0.00E+00	0.00E+00	7.94E-05	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	9.76E-05	1.50E-02	6.51E-03	2.50E-02	3.91E-03	0.02%	0.13%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.88E-04	mg/kg	#######			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.89E-07	2.89E-07	7.00E-02	4.12E-06	7.00E-01	4.12E-07	0.00%	0.00%
Nickel	0.00E+00	mg/L	9.70E+00	mg/kg	6.36E+00	mg/kg	#######		4.86E-01	1.06E+00	6.15E-02	6.84E-02	6.84E-02	8.71E-02	8.71E-02	0.00E+00	2.88E-03	0.00E+00	0.00E+00	5.38E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.32E-04	8.90E-03	4.00E+01	2.22E-04	8.00E+01	1.11E-04	0.00%	0.00%
Nitrate	4.32E-01	mg/L	4.60E-01	mg/kg	0.00E+00	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	1.68E-02	1.37E-04	0.00E+00	2.67E+00	2.21E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.69E+00	5.07E+02	5.30E-03	1.13E+03	2.38E-03	0.02%	0.08%
Nitrate/Nitrite	2.93E+01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	3.01E+02								1.14E+00	0.00E+00	0.00E+00	1.81E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.82E+02	5.07E+02	3.59E-01	1.13E+03	1.61E-01	1.27%	5.24%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E-04	mg/kg	#######			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.71E-07	1.71E-07	4.58E+00	3.73E-08	9.16E+00	1.86E-08	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.62E-04	mg/kg	#######			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.62E-07	5.62E-07	2.40E-01	2.34E-06	2.40E+00	2.34E-07	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-01	mg/kg	#######			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.48E-04	2.48E-04	2.40E-01	1.03E-03	2.40E+00	1.03E-04	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	7.70E-02	mg/kg	#######			3.00E-01	NA	3.19E+01	3.19E+01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	9.74E-06	9.74E-06	8.50E+00	1.15E-06	2.55E+01	3.82E-07	0.00%	0.00%
Selenium	3.90E-03	mg/L	7.65E-01	mg/kg	3.74E-01	mg/kg	#######	2.05E+02	4.50E+00	1.21E+00	4.93E-01	4.59E-01	4.59E-01	1.51E-01	1.51E-01	1.52E-04	2.27E-04	0.00E+00	1.64E-02	3.93E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.44E-05	2.08E-02	2.00E-01	1.04E-01	3.30E-01	6.31E-02	0.37%	2.05%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.30E+01	mg/kg	#######		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.64E-03	1.64E-03	2.63E+02	6.25E-06	7.89E+02	2.08E-06	0.00%	0.00%
Sulfate	4.15E+01	mg/L	5.13E+01	mg/kg	1.30E+02	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	1.62E+00	1.52E-02	0.00E+00	2.56E+02	2.46E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.64E-02	2.58E+02	NA	NA	NA	NA	NA	NA
Thallium	5.86E-04	mg/L	4.92E-01	mg/kg	0.00E+00	mg/kg	#######	7.50E+01	4.50E+00							2.28E-05	1.46E-04	0.00E+00	9.03E-04	2.53E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.60E-03	7.40E-03	4.86E-01	7.40E-02	4.86E-02	1.72%	1.58%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.53E-07	2.53E-07	4.58E+00	5.52E-08	9.16E+00	2.76E-08	0.00%	0.00%
Vanadium	4.29E-02	mg/L	0.00E+00	mg/kg	1.45E+01	mg/kg	#######	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	1.67E-03	0.00E+00	0.00E+00	2.65E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.06E-05	2.67E-01	2.10E-01	1.27E+00	2.10E-01	1.27E-01	4.50%	4.13%
Zinc	0.00E+00	mg/L	3.15E+01	mg/kg	4.79E+01	mg/kg	#######	2.91E+03	1.94E+00	6.34E+00	1.06E+00	8.84E-01	8.84E-01	1.84E-01	1.84E-01	0.00E+00	9.37E-03	0.00E+00	0.00E+00	6.97E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.01E-02	8.92E-02	1.60E+02	5.57E-04	3.20E+02	2.79E-04	0.00%	0.01%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	2.5E-07	1.2E-07	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	6.5E-06	1.3E-06	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	2.1E-04	2.1E-05	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	7.1E-05	7.2E-06	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	1.3E-05	1.4E-06	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi \, x \, Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.9	unitless
Aq. Invert diet fraction =	0.05	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0.05	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0.00494	kg/d
Food ingestion rate =	0.38	kg/d
Body weight =	8	kg
Home range =	988	acres
Water intake rate =	0.648	L/d
Site Area =	475	acres
Area Use Factor (AUF) =	0.480769	unitless
Exposure Duration (ED) =	1	unitless

Table E-119
Tier 1 COPCs
EEQs and Hazard Indices for the Townsend's Big-Eared Bat at LHAAP
Low Impact Sub-Area/Harrison Bayou Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL		LOAEL		Percent Contribution to	Percent Contribution to
							---Unitless---									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	EEQ N	mg/kg-d	EEQ L	EEQ N	EEQ L
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	9.44E-09	mg/L	1.41E-05	mg/kg	3.95E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	1.49E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.34E-09	0.00E+00	0.00E+00	0.00E+00	2.83E-09	1.00E-06	2.83E-03	1.00E-05	2.83E-04	0.13%	0.08%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.40E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.39E-06	0.00E+00	0.00E+00	0.00E+00	8.39E-06	8.00E-01	1.05E-05	4.00E+00	2.10E-06	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	4.30E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-04	0.00E+00	0.00E+00	0.00E+00	2.00E-04	8.00E-01	2.49E-04	4.00E+00	4.99E-05	0.01%	0.01%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.23E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E-05	0.00E+00	0.00E+00	0.00E+00	1.33E-05	8.00E-01	1.67E-05	4.00E+00	3.34E-06	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.87E-04	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.49E-08	0.00E+00	0.00E+00	0.00E+00	9.49E-08	2.00E-01	4.75E-07	1.00E+00	9.49E-08	0.00%	0.00%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.76E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.14E-06	0.00E+00	0.00E+00	0.00E+00	1.14E-06	4.58E+00	2.48E-07	9.16E+00	1.24E-07	0.00%	0.00%
Aluminum	2.03E+01	mg/L	1.03E+04	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	3.21E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.21E+00	1.93E+00	1.66E+00	1.93E+01	1.66E-01	74.10%	48.17%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	6.37E-01	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.34E-03	0.00E+00	0.00E+00	0.00E+00	3.34E-03	1.25E-01	2.67E-02	1.25E+00	2.67E-03	1.19%	0.77%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.07E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.75E-05	0.00E+00	0.00E+00	0.00E+00	3.75E-05	6.85E-02	5.47E-04	6.85E-01	5.47E-05	0.02%	0.02%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.42E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E-06	0.00E+00	0.00E+00	0.00E+00	1.07E-06	6.80E-02	1.58E-05	6.80E-01	1.58E-06	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.11E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.72E-06	0.00E+00	0.00E+00	0.00E+00	2.72E-06	6.80E-02	4.00E-05	6.80E-01	4.00E-06	0.00%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	7.47E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.54E-06	0.00E+00	0.00E+00	0.00E+00	2.54E-06	6.80E-02	3.74E-05	6.80E-01	3.74E-06	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.50E-04	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.35E-05	0.00E+00	0.00E+00	0.00E+00	3.35E-05	6.80E-02	4.92E-04	6.80E-01	4.92E-05	0.02%	0.01%
Barium	0.00E+00	mg/L	2.86E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E+00	0.00E+00	1.98E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	6.80E-02	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.64E-02	0.00E+00	0.00E+00	0.00E+00	1.64E-02	4.00E+00	4.09E-03	4.00E+01	4.09E-04	0.18%	0.12%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.82E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	mg/L	1.83E-01	mg/kg	3.84E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.58E+01	1.33E+00	9.52E-01	9.52E-01	9.22E-01	9.22E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.74E-02	0.00E+00	0.00E+00	0.00E+00	2.74E-02	1.00E+00	2.74E-02	1.00E+01	2.74E-03	1.22%	0.79%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.88E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.66E-07	0.00E+00	0.00E+00	0.00E+00	5.66E-07	4.58E+00	1.24E-07	9.16E+00	6.18E-08	0.00%	0.00%
Chromium	1.27E-02	mg/L	0.00E+00	mg/kg	1.22E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	2.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.40E-01	0.00E+00	0.00E+00	0.00E+00	4.42E-01	3.28E+00	1.35E-01	1.31E+01	3.36E-02	6.01%	9.74%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.47E-07	0.00E+00	0.00E+00	0.00E+00	7.47E-07	4.58E+00	1.63E-07	9.16E+00	8.16E-08	0.00%	0.00%
Copper	1.69E-02	mg/L	7.78E+00	mg/kg	7.43E+00	mg/kg	1.00E+00	5.92E+03	5.25E+00	1.32E+00	5.59E-01	5.75E-01	5.75E-01	1.49E-01	1.49E-01	2.67E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.20E-01	0.00E+00	0.00E+00	0.00E+00	3.22E-01	1.17E+01	2.76E-02	1.51E+01	2.13E-02	1.23%	6.17%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.86E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.28E-05	0.00E+00	0.00E+00	0.00E+00	2.28E-05	2.00E-02	1.14E-03	2.00E-01	1.14E-04	0.05%	0.03%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.75E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.88E-07	0.00E+00	0.00E+00	0.00E+00	7.88E-07	9.20E-02	8.56E-06	9.20E-01	8.56E-07	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.20E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.11E-07	0.00E+00	0.00E+00	0.00E+00	3.11E-07	8.00E-02	3.89E-06	2.90E-01	1.07E-06	0.00%	0.00%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	2.91E+01	mg/L	0.00E+00	mg/kg	1.00E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	4.59E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.00E+00	0.00E+00	0.00E+00	0.00E+00	7.60E+00	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	7.24E-03	mg/L	0.00E+00	mg/kg	2.51E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	4.39E-01	NA	6.40E-02	6.40E-02	1.33E-02	1.33E-02	1.14E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	1.20E-01	0.00E+00	0.00E+00	0.00E+00	1.22E-01	8.00E+00	1.52E-02	8.00E+01	1.52E-03	0.68%	0.44%
Manganese	9.37E-01	mg/L	0.00E+00	mg/kg	9.35E+02	mg/kg	1.00E+00	2.00E+03	2.10E+00	2.21E-01	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	1.48E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E+00	0.00E+00	0.00E+00	0.00E+00	7.15E+00	8.80E+01	8.12E-02	2.84E+02	2.52E-02	3.62%	7.29%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.95E-02	mg/kg	1.00E+00		2.87E+00	7.16E+00	NA	1.35E+00	1.35E+00	1.03E-01	1.03E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	6.00E-03	0.00E+00	0.00E+00	0.00E+00	6.00E-03	1.32E+01	4.55E-04	3.96E+01	1.52E-04	0.02%	0.04%
Mercury (methyl)	0.00E+00	mg/L	8.29E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.16E+00	NA	NA			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	3.20E-02	0.00E+00	1.60E-01	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.41E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.78E-07	0.00E+00	0.00E+00	0.00E+00	8.78E-07	7.00E-02	1.25E-05	7.00E-01	1.25E-06	0.00%	0.00%
Nickel	0.00E+00	mg/L	1.10E+01	mg/kg	7.10E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	5.96E-02	6.65E-02	6.65E-02	1.01E-01	1.01E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-02	0.00E+00	0.00E+00	0.00E+00	3.54E-02	4.00E+01	8.84E-04	8.00E+01	4.42E-04	0.04%	0.13%
Nitrate	7.46E-01	mg/L	7.48E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	1.18E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.18E-01	5.07E+02	2.32E-04	1.13E+03	1.04E-04	0.01%	0.03%
Nitrate/Nitrite	5.84E+01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03								9.23E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.23E+00	5.07E+02	1.82E-02	1.13E+03	8.16E-03	0.81%	2.37%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.47E-07	0.00E+00	0.00E+00	0.00E+00	3.47E-07	4.58E+00	7.57E-08	9.16E+00	3.78E-08	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	8.83E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.21E-06	0.00E+00	0.00E+00	0.00E+00	2.21E-06	2.40E-01	9.22E-06	2.40E+00	9.22E-07	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	4.23E-01	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.23E-03	0.00E+00	0.00E+00	0.00E+00	2.23E-03	2.40E-01	9.29E-03	2.40E+00	9.29E-04	0.41%	0.27%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.80E-01	mg/kg	1.00E+00			1.14E+00	NA	1.88E+01	1.88E+01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	3.94E-01	0.00E+00	0.00E+00	0.00E+00	3.94E-01	8.50E+00	4.63E-02	2.55E+01	1.54E-02	2.06%	4.47%
Selenium	4.63E-03	mg/L	9.08E-01	mg/kg	4.13E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.18E+00	5.02E-01	4.64E-01	4.64E-01	1.95E-01	1.95E-01	7.30E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.43E-02	0.00E+00	0.00E+00	0.00E+00	1.50E-02	2.00E-01	7.52E-02	3.30E-01	4.56E-02	3.35%	13.21%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.74E-01	0.00E+00	0.00E+00	0.00E+00	3.74E-01	2.63E+02	1.42E-03	7.89E+02	4.74E-04	0.06%	0.14%
Sulfate	5.76E+01	mg/L	7.51E+01	mg/kg	2.30E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	9.10E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.02E+00	0.00E+00	0.00E+00	0.00E+00	1.51E+01	NA	NA	NA	NA	NA	NA
Thallium	7.55E-04	mg/L	6.00E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00							1.19E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.19E-04	7.40E-03	1.61E-02	7.40E-02	1.61E-03	0.72%	0.47%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.04E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.16E-07	0.00E+00	0.00E+00	0.00E+00	9.16E-07	4.58E+00	2.00E-07	9.16E+00	1.00E-07	0.00%	0.00%
Vanadium	6.18E-02	mg/L	0.00E+00	mg/kg	1.53E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	9.76E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.59E-03	0.00E+00	0.00E+00	0.00E+00	1.44E-02	2.10E-01	6.83E-02	2.10E+00	6.83E-03	3.05%	1.98%
Zinc	0.00E+00	mg/L	3.58E+01	mg/kg	5.89E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.53E+00	1.01E+00	8.08E-01	8.08E-01	4.51E-01	4.51E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.56E+00	0.00E+00	0.00E+00	0.00E+00	3.56E+00	1.60E+02	2.23E-02	3.20E+02	1.11E-02	0.99%	3.22%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	8.1E-07	4.1E-07	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	2.8E-04	5.5E-05	0.01%	0.02%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.1E-03	1.1E-04	0.05%	0.03%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	1.1E-03	1.1E-04	0.05%	0.03%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text tables.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	1	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.000711	kg/d
Body weight =	0.0095	kg
Home range =	1310	acres
Water intake rate =	0.0015	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-120
Tier 2 COPCs
EEQs and Hazard Indices for the Townsend's Big-Eared Bat at LHAAP
Low Impact Sub-Area/Harrison Bayou Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							-----Unitless-----									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	8.00E-09	mg/L	4.00E-06	mg/kg	3.18E-06	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	1.03E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.56E-10	0.00E+00	0.00E+00	0.00E+00	1.79E-09	1.00E-06	1.79E-03	1.00E-05	1.79E-04	0.17%	0.11%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	8.00E-04	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.37E-06	0.00E+00	0.00E+00	0.00E+00	1.37E-06	8.00E-01	1.72E-06	4.00E+00	3.43E-07	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	3.10E-03	mg/kg	1.00E+00		4.75E+00	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.58E-05	0.00E+00	0.00E+00	0.00E+00	2.58E-05	8.00E-01	3.23E-05	4.00E+00	6.46E-06	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.07E-03	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E-06	0.00E+00	0.00E+00	0.00E+00	1.83E-06	8.00E-01	2.29E-06	4.00E+00	4.58E-07	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.24E-08	0.00E+00	0.00E+00	0.00E+00	5.24E-08	2.00E-01	2.62E-07	1.00E+00	5.24E-08	0.00%	0.00%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.15E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-07	0.00E+00	0.00E+00	0.00E+00	1.80E-07	4.58E+00	3.93E-08	9.16E+00	1.97E-08	0.00%	0.00%
Aluminum	1.12E+01	mg/L	7.50E+03	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	1.45E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.45E+00	1.93E+00	7.51E-01	1.93E+01	7.51E-02	73.22%	44.26%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-01	mg/kg	1.00E+00			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E-03	0.00E+00	0.00E+00	0.00E+00	1.15E-03	1.25E-01	9.24E-03	1.25E+00	9.24E-04	0.90%	0.54%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.55E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.31E-06	0.00E+00	0.00E+00	0.00E+00	1.31E-06	6.85E-02	1.91E-05	6.85E-01	1.91E-06	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.21E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.21E-07	0.00E+00	0.00E+00	0.00E+00	6.21E-07	6.80E-02	9.13E-06	6.80E-01	9.13E-07	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	3.32E-03	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.27E-07	0.00E+00	0.00E+00	0.00E+00	7.27E-07	6.80E-02	1.07E-05	6.80E-01	1.07E-06	0.00%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	4.07E-03	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.60E-07	0.00E+00	0.00E+00	0.00E+00	1.60E-07	6.80E-02	2.36E-06	6.80E-01	2.36E-07	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	7.92E-04	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.55E-05	0.00E+00	0.00E+00	0.00E+00	2.55E-05	6.80E-02	3.76E-04	6.80E-01	3.76E-05	0.04%	0.02%
Barium	0.00E+00	mg/L	2.32E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E+00	0.00E+00	1.98E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	5.10E-02	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-02	0.00E+00	0.00E+00	0.00E+00	1.00E-02	4.00E+00	2.51E-03	4.00E+01	2.51E-04	0.24%	0.15%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.33E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	mg/L	1.83E-01	mg/kg	3.02E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	2.87E+01	1.33E+00	1.06E+00	1.06E+00	6.72E-01	6.72E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.96E-02	0.00E+00	0.00E+00	0.00E+00	1.96E-02	1.00E+00	1.96E-02	1.00E+01	1.96E-03	1.91%	1.16%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.89E-08	0.00E+00	0.00E+00	0.00E+00	9.89E-08	4.58E+00	2.16E-08	9.16E+00	1.08E-08	0.00%	0.00%
Chromium	9.95E-03	mg/L	0.00E+00	mg/kg	1.10E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	1.29E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.77E-02	0.00E+00	0.00E+00	0.00E+00	2.90E-02	3.28E+00	8.83E-03	1.31E+01	2.20E-03	0.86%	1.30%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.21E-07	0.00E+00	0.00E+00	0.00E+00	1.21E-07	4.58E+00	2.65E-08	9.16E+00	1.32E-08	0.00%	0.00%
Copper	1.19E-02	mg/L	6.82E+00	mg/kg	6.53E+00	mg/kg	1.00E+00	1.11E+03	1.56E+00	1.45E+00	6.06E-01	6.22E-01	6.22E-01	8.97E-02	8.97E-02	1.53E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.49E-01	0.00E+00	0.00E+00	0.00E+00	2.50E-01	1.17E+01	2.14E-02	1.51E+01	1.65E-02	2.09%	9.74%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.72E-04	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.53E-07	0.00E+00	0.00E+00	0.00E+00	2.53E-07	2.00E-02	1.26E-05	2.00E-01	1.26E-06	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.99E-07	0.00E+00	0.00E+00	0.00E+00	3.99E-07	9.20E-02	4.34E-06	9.20E-01	4.34E-07	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.93E-04	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.88E-07	0.00E+00	0.00E+00	0.00E+00	1.88E-07	8.00E-02	2.35E-06	2.90E-01	6.48E-07	0.00%	0.00%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	1.61E+01	mg/L	0.00E+00	mg/kg	9.10E+03	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	2.09E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.23E+00	0.00E+00	0.00E+00	0.00E+00	4.32E+00	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	5.66E-03	mg/L	0.00E+00	mg/kg	2.21E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	4.50E-01	NA	6.78E-02	6.78E-02	1.16E-02	1.16E-02	7.32E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	9.17E-02	0.00E+00	0.00E+00	0.00E+00	9.24E-02	8.00E+00	1.16E-02	8.00E+01	1.16E-03	1.13%	0.68%
Manganese	6.92E-01	mg/L	0.00E+00	mg/kg	8.30E+02	mg/kg	1.00E+00	2.50E+02	4.20E-01	2.26E-01	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	8.94E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E+00	0.00E+00	0.00E+00	0.00E+00	4.10E+00	8.80E+01	4.66E-02	2.84E+02	1.45E-02	4.55%	8.51%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-02	mg/kg	1.00E+00		1.14E+00	7.64E+00	NA	1.41E+00	1.41E+00	9.15E-02	9.15E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	4.66E-03	0.00E+00	0.00E+00	0.00E+00	4.66E-03	1.32E+01	3.53E-04	3.96E+01	1.18E-04	0.03%	0.07%
Mercury (methyl)	0.00E+00	mg/L	6.13E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	1.33E+00	NA	NA			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	3.20E-02	0.00E+00	1.60E-01	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.88E-04	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.08E-08	0.00E+00	0.00E+00	0.00E+00	6.08E-08	7.00E-02	8.68E-07	7.00E-01	8.68E-08	0.00%	0.00%
Nickel	0.00E+00	mg/L	9.70E+00	mg/kg	6.36E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	6.15E-02	6.84E-02	6.84E-02	8.71E-02	8.71E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.66E-02	0.00E+00	0.00E+00	0.00E+00	2.66E-02	4.00E+01	6.66E-04	8.00E+01	3.33E-04	0.06%	0.20%
Nitrate	4.32E-01	mg/L	4.60E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	5.58E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.58E-02	5.07E+02	1.10E-04	1.13E+03	4.94E-05	0.01%	0.03%
Nitrate/Nitrite	2.93E+01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02								3.78E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.78E+00	5.07E+02	7.47E-03	1.13E+03	3.35E-03	0.73%	1.97%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E-04	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.75E-07	0.00E+00	0.00E+00	0.00E+00	2.75E-07	4.58E+00	6.01E-08	9.16E+00	3.01E-08	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.62E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.43E-07	0.00E+00	0.00E+00	0.00E+00	9.43E-07	2.40E-01	3.93E-06	2.40E+00	3.93E-07	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-01	mg/kg	1.00E+00			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.45E-04	0.00E+00	0.00E+00	0.00E+00	6.45E-04	2.40E-01	2.69E-03	2.40E+00	2.69E-04	0.26%	0.16%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	7.70E-02	mg/kg	1.00E+00			3.00E-01	NA	3.19E+01	3.19E+01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	1.51E-01	0.00E+00	0.00E+00	0.00E+00	1.51E-01	8.50E+00	1.77E-02	2.55E+01	5.91E-03	1.73%	3.48%
Selenium	3.90E-03	mg/L	7.65E-01	mg/kg	3.74E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.21E+00	4.93E-01	4.59E-01	4.59E-01	1.51E-01	1.51E-01	5.05E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E-02	0.00E+00	0.00E+00	0.00E+00	1.10E-02	2.00E-01	5.51E-02	3.30E-01	3.34E-02	5.36%	19.65%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.30E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.67E-01	0.00E+00	0.00E+00	0.00E+00	1.67E-01	2.63E+02	6.35E-04	7.89E+02	2.12E-04	0.06%	0.12%
Sulfate	4.15E+01	mg/L	5.13E+01	mg/kg	1.30E+02	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	5.36E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.67E+00	0.00E+00	0.00E+00	0.00E+00	7.03E+00	NA	NA	NA	NA	NA	NA
Thallium	5.86E-04	mg/L	4.92E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00							7.57E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.57E-05	7.40E-03	1.02E-02	7.40E-02	1.02E-03	1.00%	0.60%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.44E-07	0.00E+00	0.00E+00	0.00E+00	1.44E-07	4.58E+00	3.15E-08	9.16E+00	1.58E-08	0.00%	0.00%
Vanadium	4.29E-02	mg/L	0.00E+00	mg/kg	1.45E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	5.54E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.19E-03	0.00E+00	0.00E+00	0.00E+00	8.73E-03	2.10E-01	4.16E-02	2.10E+00	4.16E-03	4.05%	2.45%
Zinc	0.00E+00	mg/L	3.15E+01	mg/kg	4.79E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	6.34E+00	1.06E+00	8.84E-01	8.84E-01	1.84E-01	1.84E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.60E+00	0.00E+00	0.00E+00	0.00E+00	2.60E+00	1.60E+02	1.62E-02	3.20E+02	8.12E-03	1.58%	4.78%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.8E-07	8.9E-08	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	3.6E-05	7.3E-06	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	4.2E-04	4.2E-05	0.04%	0.02%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	1.7E-05	1.8E-06	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Unit
Terrestrial plant diet fraction =	1	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.000711	kg/d
Body weight =	0.0095	kg
Home range =	3930	acres
Water intake rate =	0.0015	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	0.8185751	unitless
Exposure Duration (ED) =	1	unitless

Table E-121
Tier 1 COPCs
EEQs and Hazard Indices for the Snapping Turtle at LHAAP
Low Impact Sub-Area/Harrison Bayou Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							------Unitless------									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDD TEQ	9.44E-09	mg/L	1.41E-05	mg/kg	3.95E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	1.89E-10	2.24E-09	0.00E+00	2.80E-06	4.91E-08	0.00E+00	7.14E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.86E-06	NA	NA	NA	NA	NA	NA
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.40E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	4.30E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.23E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.87E-04	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.76E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aluminum	2.03E+01	mg/L	1.03E+04	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	4.06E-01	1.63E+00	0.00E+00	1.53E-01	7.35E+00	0.00E+00	2.63E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.57E+00	NA	NA	NA	NA	NA	NA
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	6.37E-01	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.07E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.42E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.11E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	7.47E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.50E-04	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Barium	0.00E+00	mg/L	2.86E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	4.55E-02	0.00E+00	0.00E+00	2.05E-01	0.00E+00	2.93E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E-01	NA	NA	NA	NA	NA	NA
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	6.80E-02	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.82E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	0.00E+00	4.47E-05	0.00E+00	0.00E+00	9.80E-04	0.00E+00	4.91E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.03E-03	NA	NA	NA	NA	NA	NA
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	0.00E+00	mg/L	1.83E-01	mg/kg	3.84E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.58E+01	1.33E+00	9.52E-01	1.33E+00	9.22E-01	9.22E-01	0.00E+00	2.91E-05	0.00E+00	0.00E+00	2.32E-04	0.00E+00	2.71E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.32E-04	NA	NA	NA	NA	NA	NA
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.88E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Chromium	1.27E-02	mg/L	0.00E+00	mg/kg	1.22E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	2.53E-04	0.00E+00	0.00E+00	2.21E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.24E-02	NA	NA	NA	NA	NA	NA
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Copper	1.69E-02	mg/L	7.78E+00	mg/kg	7.43E+00	mg/kg	1.00E+00	5.92E+03	5.25E+00	1.32E+00	5.59E-01	5.75E-01	5.59E-01	1.49E-01	1.49E-01	3.38E-04	1.24E-03	0.00E+00	1.75E-01	6.49E-03	0.00E+00	4.84E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.88E-01	NA	NA	NA	NA	NA	NA
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.86E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.75E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.20E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Iron	2.91E+01	mg/L	0.00E+00	mg/kg	1.00E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	5.82E-01	0.00E+00	0.00E+00	5.09E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.15E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	7.24E-03	mg/L	0.00E+00	mg/kg	2.51E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	4.39E-01	NA	6.40E-02	NA	1.33E-02	1.33E-02	1.45E-04	0.00E+00	0.00E+00	1.90E-02	0.00E+00	0.00E+00	NA	0.00E+00	NA	0.00E+00	0.00E+00	1.91E-02	NA	NA	NA	NA	NA	NA
Manganese	9.37E-01	mg/L	0.00E+00	mg/kg	9.35E+02	mg/kg	1.00E+00	2.00E+03	2.10E+00	2.21E-01	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	1.87E-02	0.00E+00	0.00E+00	3.28E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.29E+00	NA	NA	NA	NA	NA	NA
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.95E-02	mg/kg	1.00E+00		2.87E+00	7.16E+00	NA	1.35E+00	NA	1.03E-01	1.03E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Mercury (methyl)	0.00E+00	mg/L	8.29E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.16E+00	NA	1.16E+00			0.00E+00	1.32E-05	0.00E+00	0.00E+00	3.78E-05	NA	1.07E-04	NA	0.00E+00	0.00E+00	0.00E+00	1.58E-04	NA	NA	NA	NA	NA	NA
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.41E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	mg/L	1.10E+01	mg/kg	7.10E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	5.96E-02	6.65E-02	6.65E-02	1.01E-01	1.01E-01	0.00E+00	1.75E-03	0.00E+00	0.00E+00	4.05E-03	0.00E+00	7.29E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.53E-03	NA	NA	NA	NA	NA	NA
Nitrate	7.46E-01	mg/L	7.48E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	1.49E-02	1.19E-04	0.00E+00	1.39E+00	2.50E-04	0.00E+00	2.91E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.41E+00	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	5.84E+01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03								1.17E+00	0.00E+00	0.00E+00	1.09E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E+02	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	8.83E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	4.23E-01	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.80E-01	mg/kg	1.00E+00			1.14E+00	NA	1.88E+01	1.88E+01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Selenium	4.63E-03	mg/L	9.08E-01	mg/kg	4.13E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.18E+00	5.02E-01	4.64E-01	5.02E-01	1.95E-01	1.95E-01	9.25E-05	1.44E-04	0.00E+00	1.66E-03	6.49E-04	0.00E+00	5.07E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.05E-03	NA	NA	NA	NA	NA	NA
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Sulfate	5.76E+01	mg/L	7.51E+01	mg/kg	2.30E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	1.15E+00	1.19E-02	0.00E+00	1.08E+02	2.51E-02	0.00E+00	2.92E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E+02	NA	NA	NA	NA	NA	NA
Thallium	7.55E-04	mg/L	6.00E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00							1.51E-05	9.52E-05	0.00E+00	2.10E-02	4.29E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.15E-02	NA	NA	NA	NA	NA	NA
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.04E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Vanadium	6.18E-02	mg/L	0.00E+00	mg/kg	1.53E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	1.24E-03	0.00E+00	0.00E+00	1.15E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E-01	NA	NA	NA	NA	NA	NA
Zinc	0.00E+00	mg/L	3.58E+01	mg/kg	5.89E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.53E+00	1.01E+00	8.08E-01	1.01E+00	4.51E-01	4.51E-01	0.00E+00	5.68E-03	0.00E+00	0.00E+00	4.28E-02	0.00E+00	4.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.85E-02	NA	NA	NA	NA	NA	NA

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	0.0E+00	0.0E+00	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	0.0E+00	0.0E+00	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi x Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0.35	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.55	unitless
Aq. Invert diet fraction =	0.05	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0.000889	kg/d
Food ingestion rate =	0.0178	kg/d
Body weight =	5.6	kg
Home range =	0.593051	acres
Water intake rate =	0.112	L/d
Site Area =	475	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-122
Tier 2 COPCs
EEQs and Hazard Indices for the Snapping Turtle at LHAAP
Low Impact Sub-Area/Harrison Bayou Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
									--Unitless					---------------------------------------		mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDD TEQ	8.00E-09	mg/L	4.00E-06	mg/kg	3.18E-06	mg/kg	#######	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	1.60E-10	6.35E-10	0.00E+00	3.23E-07	2.97E-09	0.00E+00	1.72E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.27E-07	NA	NA	NA	NA	NA	NA
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	8.00E-04	mg/kg	#######		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	3.10E-03	mg/kg	#######		4.75E+00	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.07E-03	mg/kg	#######		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	#######			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.15E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aluminum	1.12E+01	mg/L	7.50E+03	mg/kg	0.00E+00	mg/kg	#######	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	2.24E-01	1.19E+00	0.00E+00	8.43E-02	5.36E+00	0.00E+00	1.25E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.88E+00	NA	NA	NA	NA	NA	NA
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-01	mg/kg	#######			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.55E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.21E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	3.32E-03	mg/kg	#######		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	4.07E-03	mg/kg	#######			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	7.92E-04	mg/kg	#######			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Barium	0.00E+00	mg/L	2.32E+02	mg/kg	0.00E+00	mg/kg	#######	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	3.68E-02	0.00E+00	0.00E+00	1.66E-01	0.00E+00	4.02E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.43E-01	NA	NA	NA	NA	NA	NA
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	5.10E-02	mg/kg	#######			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.33E-01	mg/kg	0.00E+00	mg/kg	#######	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	0.00E+00	3.69E-05	0.00E+00	0.00E+00	1.73E-04	0.00E+00	1.42E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E-04	NA	NA	NA	NA	NA	NA
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	0.00E+00	mg/L	1.83E-01	mg/kg	3.02E-01	mg/kg	#######	1.15E+03	6.00E-01	2.87E+01	1.33E+00	1.06E+00	1.33E+00	6.72E-01	6.72E-01	0.00E+00	2.91E-05	0.00E+00	0.00E+00	1.75E-05	0.00E+00	2.71E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.17E-04	NA	NA	NA	NA	NA	NA
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Chromium	9.95E-03	mg/L	0.00E+00	mg/kg	1.10E+01	mg/kg	#######	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	1.99E-04	0.00E+00	0.00E+00	6.26E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.46E-03	NA	NA	NA	NA	NA	NA
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Copper	1.19E-02	mg/L	6.82E+00	mg/kg	6.53E+00	mg/kg	#######	1.11E+03	1.56E+00	1.45E+00	6.06E-01	6.22E-01	6.06E-01	8.97E-02	8.97E-02	2.37E-04	1.08E-03	0.00E+00	2.31E-02	1.69E-03	0.00E+00	4.60E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.07E-02	NA	NA	NA	NA	NA	NA
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.72E-04	mg/kg	#######		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-04	mg/kg	#######			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.93E-04	mg/kg	#######			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Iron	1.61E+01	mg/L	0.00E+00	mg/kg	9.10E+03	mg/kg	#######	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	3.23E-01	0.00E+00	0.00E+00	7.05E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.38E+00	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	5.66E-03	mg/L	0.00E+00	mg/kg	2.21E+01	mg/kg	#######	4.48E+02	7.10E-02	4.50E-01	NA	6.78E-02	NA	1.16E-02	1.16E-02	1.13E-04	0.00E+00	0.00E+00	4.43E-03	0.00E+00	0.00E+00	NA	0.00E+00	NA	0.00E+00	0.00E+00	4.55E-03	NA	NA	NA	NA	NA	NA
Manganese	6.92E-01	mg/L	0.00E+00	mg/kg	8.30E+02	mg/kg	#######	2.50E+02	4.20E-01	2.26E-01	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	1.38E-02	0.00E+00	0.00E+00	3.02E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.16E-01	NA	NA	NA	NA	NA	NA
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-02	mg/kg	#######		1.14E+00	7.64E+00	NA	1.41E+00	NA	9.15E-02	9.15E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Mercury (methyl)	0.00E+00	mg/L	6.13E-02	mg/kg	0.00E+00	mg/kg	#######		1.14E+00	NA	1.33E+00	NA	1.33E+00			0.00E+00	9.72E-06	0.00E+00	0.00E+00	1.11E-05	NA	9.06E-05	NA	0.00E+00	0.00E+00	0.00E+00	1.11E-04	NA	NA	NA	NA	NA	NA
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.88E-04	mg/kg	#######			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	mg/L	9.70E+00	mg/kg	6.36E+00	mg/kg	#######		4.86E-01	1.06E+00	6.15E-02	6.84E-02	6.84E-02	8.71E-02	8.71E-02	0.00E+00	1.54E-03	0.00E+00	0.00E+00	7.49E-04	0.00E+00	6.64E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.95E-03	NA	NA	NA	NA	NA	NA
Nitrate	4.32E-01	mg/L	4.60E-01	mg/kg	0.00E+00	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	8.63E-03	7.30E-05	0.00E+00	2.27E-01	3.07E-05	0.00E+00	1.07E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.36E-01	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	2.93E+01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	3.01E+02								5.86E-01	0.00E+00	0.00E+00	1.54E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.60E+01	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E-04	mg/kg	#######			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.62E-04	mg/kg	#######			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-01	mg/kg	#######			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	7.70E-02	mg/kg	#######			3.00E-01	NA	3.19E+01	3.19E+01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Selenium	3.90E-03	mg/L	7.65E-01	mg/kg	3.74E-01	mg/kg	#######	2.05E+02	4.50E+00	1.21E+00	4.93E-01	4.59E-01	4.93E-01	1.51E-01	1.51E-01	7.81E-05	1.21E-04	0.00E+00	1.40E-03	5.47E-04	0.00E+00	4.20E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.57E-03	NA	NA	NA	NA	NA	NA
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.30E+01	mg/kg	#######		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Sulfate	4.15E+01	mg/L	5.13E+01	mg/kg	1.30E+02	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	8.30E-01	8.14E-03	0.00E+00	2.18E+01	3.42E-03	0.00E+00	1.20E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.27E+01	NA	NA	NA	NA	NA	NA
Thallium	5.86E-04	mg/L	4.92E-01	mg/kg	0.00E+00	mg/kg	#######	7.50E+01	4.50E+00							1.17E-05	7.81E-05	0.00E+00	7.68E-05	3.52E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.18E-04	NA	NA	NA	NA	NA	NA
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Vanadium	4.29E-02	mg/L	0.00E+00	mg/kg	1.45E+01	mg/kg	#######	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	8.57E-04	0.00E+00	0.00E+00	2.25E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.34E-02	NA	NA	NA	NA	NA	NA
Zinc	0.00E+00	mg/L	3.15E+01	mg/kg	4.79E+01	mg/kg	#######	2.91E+03	1.94E+00	6.34E+00	1.06E+00	8.84E-01	1.06E+00	1.84E-01	1.84E-01	0.00E+00	5.01E-03	0.00E+00	0.00E+00	9.71E-03	0.00E+00	3.73E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.20E-02	NA	NA	NA	NA	NA	NA

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	0.0E+00	0.0E+00	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	0.0E+00	0.0E+00	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0.35	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.55	unitless
Aq. Invert diet fraction =	0.05	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0.000889	kg/d
Food ingestion rate =	0.0178	kg/d
Body weight =	5.6	kg
Home range =	11.21854	acres
Water intake rate =	0.112	L/d
Site Area =	475	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-123
Tier 1 COPCs
EEQs and Hazard Indices for the Bank Swallow at LHAAP
Low Impact Sub-Area/Harrison Bayou Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
							-----	-----	-----	-----	-----Unitless-----	-----	-----	-----	-----
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00
2,3,7,8-TCDD TEQ	9.44E-09	mg/L	1.41E-05	mg/kg	3.95E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.40E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	4.30E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.23E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.87E-04	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.76E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Aluminum	2.03E+01	mg/L	1.03E+04	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	6.37E-01	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.07E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.42E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.11E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	7.47E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.50E-04	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00
Barium	0.00E+00	mg/L	2.86E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	6.80E-02	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.82E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00
Cadmium	0.00E+00	mg/L	1.83E-01	mg/kg	3.84E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.58E+01	1.33E+00	9.52E-01	9.52E-01	9.22E-01	9.22E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.88E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Chromium	1.27E-02	mg/L	0.00E+00	mg/kg	1.22E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Copper	1.69E-02	mg/L	7.78E+00	mg/kg	7.43E+00	mg/kg	1.00E+00	5.92E+03	5.25E+00	1.32E+00	5.59E-01	5.75E-01	5.75E-01	1.49E-01	1.49E-01
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.86E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.75E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.20E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00
Iron	2.91E+01	mg/L	0.00E+00	mg/kg	1.00E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01		
Lead	7.24E-03	mg/L	0.00E+00	mg/kg	2.51E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	4.39E-01	NA	6.40E-02	6.40E-02	1.33E-02	1.33E-02
Manganese	9.37E-01	mg/L	0.00E+00	mg/kg	9.35E+02	mg/kg	1.00E+00	2.00E+03	2.10E+00	2.21E-01	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.95E-02	mg/kg	1.00E+00		2.87E+00	7.16E+00	NA	1.35E+00	1.35E+00	1.03E-01	1.03E-01
Mercury (methyl)	0.00E+00	mg/L	8.29E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.16E+00	NA	NA		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.41E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00
Nickel	0.00E+00	mg/L	1.10E+01	mg/kg	7.10E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	5.96E-02	6.65E-02	6.65E-02	1.01E-01	1.01E-01
Nitrate	7.46E-01	mg/L	7.48E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Nitrate/Nitrite	5.84E+01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	8.83E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	4.23E-01	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.80E-01	mg/kg	1.00E+00			1.14E+00	NA	1.88E+01	1.88E+01	1.66E-01	1.66E-01
Selenium	4.63E-03	mg/L	9.08E-01	mg/kg	4.13E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.18E+00	5.02E-01	4.64E-01	4.64E-01	1.95E-01	1.95E-01
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Sulfate	5.76E+01	mg/L	7.51E+01	mg/kg	2.30E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Thallium	7.55E-04	mg/L	6.00E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.04E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Vanadium	6.18E-02	mg/L	0.00E+00	mg/kg	1.53E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03
Zinc	0.00E+00	mg/L	3.58E+01	mg/kg	5.89E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.53E+00	1.01E+00	8.08E-01	8.08E-01	4.51E-01	4.51E-01

Chemical	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL		LOAEL		Percent Contribution to	Percent Contribution to
	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	EEQ N	mg/kg-d	EEQ L	EEQ N	EEQ L
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.22E-01	0.00E+00	1.27E+00	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	2.26E-09	3.32E-08	0.00E+00	0.00E+00	1.31E-05	4.15E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E-05	1.40E-05	9.71E-01	1.40E-04	9.71E-02	3.81%	1.20%
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.03E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.03E-04	2.80E-03	3.67E-02	2.80E-02	3.67E-03	0.14%	0.05%
4,4'-DDE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.17E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.17E-04	5.80E-02	5.47E-03	5.80E-01	5.47E-04	0.02%	0.01%
4,4'-DDT	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.70E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.70E-04	2.80E-03	6.06E-02	2.80E-02	6.06E-03	0.24%	0.07%
Aldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-05	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.80E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.80E-05	2.14E+00	1.31E-05	1.07E+01	2.62E-06	0.00%	0.00%
Aluminum	4.87E+00	2.42E+01	0.00E+00	0.00E+00	1.97E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E+03	1.10E+02	1.82E+01	3.29E+02	6.07E+00	71.36%	75.07%
Antimony	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.43E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.43E-03	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.29E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.29E-04	4.10E-01	5.59E-04	1.23E+00	1.86E-04	0.00%	0.00%
Aroclor 1248	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.06E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.06E-04	1.80E-01	5.89E-04	1.80E+00	5.89E-05	0.00%	0.00%
Aroclor 1254	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.15E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.15E-04	1.80E-01	1.75E-03	1.80E+00	1.75E-04	0.01%	0.00%
Aroclor 1260	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.02E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.02E-04	1.80E-01	3.34E-03	1.80E+00	3.34E-04	0.01%	0.00%
Aroclor 1268	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.63E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.63E-05	1.80E-01	3.13E-04	1.80E+00	3.13E-05	0.00%	0.00%
Barium	0.00E+00	6.74E-01	0.00E+00	0.00E+00	5.48E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.55E+01	2.08E+01	2.67E+00	4.17E+01	1.33E+00	10.46%	16.47%
Benzoic Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.26E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.26E-03	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	6.63E-04	0.00E+00	0.00E+00	2.62E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.63E-01	1.11E+00	2.37E-01	3.33E+00	7.90E-02	0.93%	0.98%
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	0.00E+00	4.31E-04	0.00E+00	0.00E+00	6.22E-02	4.68E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E-01	1.45E+00	7.55E-02	2.00E+01	5.47E-03	0.30%	0.07%
Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.40E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.40E-05	2.14E+00	6.53E-06	1.07E+01	1.31E-06	0.00%	0.00%
Chromium	3.04E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.86E-01	1.00E+00	1.86E-01	5.00E+00	3.72E-02	0.73%	0.46%
cis-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.84E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.84E-05	2.14E+00	8.62E-06	1.07E+01	1.72E-06	0.00%	0.00%
Copper	4.05E-03	1.83E-02	0.00E+00	0.00E+00	1.74E+00	4.63E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.81E+00	4.70E+01	3.84E-02	6.17E+01	2.93E-02	0.15%	0.36%
Dieldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.34E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.34E-05	7.70E-02	1.74E-04	2.31E-01	5.80E-05	0.00%	0.00%
Endrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.99E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.99E-05	3.00E-01	6.62E-05	9.00E-01	2.21E-05	0.00%	0.00%
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.20E-01	0.00E+00	2.76E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.62E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.62E-05	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Iron	6.98E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.70E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	1.74E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.22E-02	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.39E-02	1.13E+00	4.77E-02	1.13E+01	4.77E-03	0.19%	0.06%
Manganese	2.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.77E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E+00	9.77E+02	1.23E-03	9.77E+03	1.23E-04	0.00%	0.00%
Mercury (inorganic)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.01E-03	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.01E-03	4.50E-01	4.48E-03	9.00E-01	2.24E-03	0.02%	0.03%
Mercury (methyl)	0.00E+00	1.95E-04	0.00E+00	0.00E+00	1.01E-02	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	1.03E-02	6.40E-03	1.61E+00	6.40E-02	1.61E-01	6.31%	1.99%
Mirex	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.62E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.62E-05	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	2.59E-02	0.00E+00	0.00E+00	1.08E+00	1.59E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E+00	7.74E+01	1.64E-02	1.07E+02	1.19E-02	0.06%	0.15%
Nitrate	1.79E-01	1.76E-03	0.00E+00	0.00E+00	6.68E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.47E-01	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	1.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.40E+01	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E-05	2.14E+00	5.94E-06	1.07E+01	1.19E-06	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+02	0.00E+00	3.20E+02	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.34E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.34E-05	6.73E+00	9.41E-06	6.73E+01	9.41E-07	0.00%	0.00%
Pentachlorophenol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.97E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.97E-02	6.73E+00	4.41E-03	6.73E+01	4.41E-04	0.02%	0.01%
Perchlorate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.51E-03	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.51E-03	6.50E+01	2.32E-05	1.30E+02	1.16E-05	0.00%	0.00%
Selenium	1.11E-03	2.14E-03	0.00E+00	0.00E+00	1.74E-01	2.30E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.79E-01	1.80E+00	9.96E-02	5.40E+00	3.32E-02	0.39%	0.41%
Silver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E+00	0.00E+00	5.44E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.87E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.87E-02	NA	NA	NA	NA	NA	NA
Sulfate	1.38E+01	1.77E-01	0.00E+00	0.00E+00	6.71E+00	1.24E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.19E+01	NA	NA	NA	NA	NA	NA
Thallium	1.81E-04	1.41E-03	0.00E+00	0.00E+00	1.15E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.16E-01	3.50E-01	3.32E-01	1.05E+00	1.11E-01	1.30%	1.37%
trans-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.26E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.26E-05	2.14E+00	1.06E-05	1.07E+01	2.11E-06	0.00%	0.00%
Vanadium	1.48E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.38E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.12E-02	1.14E+01	1.86E-03	3.42E+01	6.20E-04	0.01%	0.01%
Zinc	0.00E+00	8.42E-02	0.00E+00	0.00E+00	1.15E+01	1.54E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.31E+01	1.45E+01	9.02E-01	1.31E+02	9.98E-02	3.53%	1.23%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	4.5E-05	8.9E-06	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	1.0E-01	1.0E-02	0.40%	0.13%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	6.6E-03	7.9E-04	0.03%	0.01%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	2.4E-01	7.9E-02	0.93%	0.98%
Aldrin/Dieldrin/Endrin EEQ:	2.4E-04	8.0E-05	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0.9	unitless
Terr. Invert diet fraction =	0.1	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	3.44E-05	kg/d
Food ingestion rate =	0.00069	kg/d
Body weight =	0.0146	kg
Home range =	49.4	acres
Water intake rate =	0.0035	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-124
Tier 2 COPCs
EEQs and Hazard Indices for the Bank Swallow at LHAAP
Low Impact Sub-Area/Harrison Bayou Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water mg/kg-d	EED Sediment mg/kg-d	EED Soil mg/kg-d	EED Fish mg/kg-d	EED Aq. Invert. mg/kg-d	EED Terr. Invert. mg/kg-d	EED Aq. Plants mg/kg-d	EED Terr. Plants mg/kg-d	EED Plant Roots mg/kg-d	EED Mammals mg/kg-d	EED Birds mg/kg-d	Total EED mg/kg-d	NOAEL mg/kg-d	EEQ N	LOAEL mg/kg-d	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.22E-01	0.00E+00	1.27E+00	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	8.00E-09	mg/L	4.00E-06	mg/kg	3.18E-06	mg/kg	#######	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	1.92E-09	9.42E-09	0.00E+00	0.00E+00	7.95E-07	1.66E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.72E-07	1.40E-05	6.94E-02	1.40E-04	6.94E-03	0.41%	0.12%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	8.00E-04	mg/kg	#######		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.39E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.39E-05	2.80E-03	1.21E-02	2.80E-02	1.21E-03	0.07%	0.02%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	3.10E-03	mg/kg	#######		4.75E+00	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.32E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.32E-04	5.80E-02	2.27E-03	5.80E-01	2.27E-04	0.01%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.07E-03	mg/kg	#######		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.68E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.68E-05	2.80E-03	1.67E-02	2.80E-02	1.67E-03	0.10%	0.03%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	#######			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.71E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.71E-06	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.15E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.35E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.35E-05	2.14E+00	6.33E-06	1.07E+01	1.27E-06	0.00%	0.00%
Aluminum	1.12E+01	mg/L	7.50E+03	mg/kg	0.00E+00	mg/kg	#######	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	2.69E+00	1.77E+01	0.00E+00	0.00E+00	1.44E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.46E+03	1.10E+02	1.33E+01	3.29E+02	4.42E+00	78.93%	76.98%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-01	mg/kg	#######			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.22E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.22E-04	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.55E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E-04	4.10E-01	2.68E-04	1.23E+00	8.94E-05	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.21E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.21E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.21E-05	1.80E-01	2.89E-04	1.80E+00	2.89E-05	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	3.32E-03	mg/kg	#######		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.47E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.47E-04	1.80E-01	8.14E-04	1.80E+00	8.14E-05	0.00%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	4.07E-03	mg/kg	#######			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.89E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.89E-04	1.80E-01	1.05E-03	1.80E+00	1.05E-04	0.01%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	7.92E-04	mg/kg	#######			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.02E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.02E-05	1.80E-01	1.68E-04	1.80E+00	1.68E-05	0.00%	0.00%
Barium	0.00E+00	mg/L	2.32E+02	mg/kg	0.00E+00	mg/kg	#######	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	5.45E-01	0.00E+00	0.00E+00	4.43E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.49E+01	2.08E+01	2.16E+00	4.17E+01	1.08E+00	12.83%	18.72%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	5.10E-02	mg/kg	#######			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.84E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.84E-03	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.33E-01	mg/kg	0.00E+00	mg/kg	#######	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	0.00E+00	5.48E-04	0.00E+00	0.00E+00	4.62E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.68E-02	1.11E+00	4.21E-02	3.33E+00	1.40E-02	0.25%	0.24%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	0.00E+00	mg/L	1.83E-01	mg/kg	3.02E-01	mg/kg	#######	1.15E+03	6.00E-01	2.87E+01	1.33E+00	1.06E+00	1.06E+00	6.72E-01	6.72E-01	0.00E+00	4.31E-04	0.00E+00	0.00E+00	4.67E-03	4.11E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.62E-02	1.45E+00	3.18E-02	2.00E+01	2.31E-03	0.19%	0.04%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.43E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.43E-06	2.14E+00	3.47E-06	1.07E+01	6.94E-07	0.00%	0.00%
Chromium	9.95E-03	mg/L	0.00E+00	mg/kg	1.10E+01	mg/kg	#######	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	2.39E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E-02	1.00E+00	1.83E-02	5.00E+00	3.67E-03	0.11%	0.06%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.11E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.11E-06	2.14E+00	4.26E-06	1.07E+01	8.51E-07	0.00%	0.00%
Copper	1.19E-02	mg/L	6.82E+00	mg/kg	6.53E+00	mg/kg	#######	1.11E+03	1.56E+00	1.45E+00	6.06E-01	6.22E-01	6.22E-01	8.97E-02	8.97E-02	2.85E-03	1.60E-02	0.00E+00	0.00E+00	4.52E-01	4.49E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.16E-01	4.70E+01	1.10E-02	6.17E+01	8.36E-03	0.07%	0.15%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.72E-04	mg/kg	#######		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.15E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.15E-06	7.70E-02	9.29E-05	2.31E-01	3.10E-05	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-04	mg/kg	#######			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.90E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.90E-06	3.00E-01	3.30E-05	9.00E-01	1.10E-05	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.20E-01	0.00E+00	2.76E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.93E-04	mg/kg	#######			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.16E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.16E-06	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Iron	1.61E+01	mg/L	0.00E+00	mg/kg	9.10E+03	mg/kg	#######	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	3.87E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.55E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.42E+00	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	5.66E-03	mg/L	0.00E+00	mg/kg	2.21E+01	mg/kg	#######	4.48E+02	7.10E-02	4.50E-01	NA	6.78E-02	6.78E-02	1.16E-02	1.16E-02	1.36E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.70E-02	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.83E-02	1.13E+00	4.28E-02	1.13E+01	4.28E-03	0.25%	0.07%
Manganese	6.92E-01	mg/L	0.00E+00	mg/kg	8.30E+02	mg/kg	#######	2.50E+02	4.20E-01	2.26E-01	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.86E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E+00	9.77E+02	1.08E-03	9.77E+03	1.08E-04	0.01%	0.00%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-02	mg/kg	#######		1.14E+00	7.64E+00	NA	1.41E+00	1.41E+00	9.15E-02	9.15E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.95E-03	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.95E-03	4.50E-01	4.33E-03	9.00E-01	2.17E-03	0.03%	0.04%
Mercury (methyl)	0.00E+00	mg/L	6.13E-02	mg/kg	0.00E+00	mg/kg	#######		1.14E+00	NA	1.33E+00	NA	NA			0.00E+00	1.44E-04	0.00E+00	0.00E+00	2.96E-03	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	3.10E-03	6.40E-03	4.85E-01	6.40E-02	4.85E-02	2.88%	0.84%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.88E-04	mg/kg	#######			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E-05	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	mg/L	9.70E+00	mg/kg	6.36E+00	mg/kg	#######		4.86E-01	1.06E+00	6.15E-02	6.84E-02	6.84E-02	8.71E-02	8.71E-02	0.00E+00	2.28E-02	0.00E+00	0.00E+00	2.01E-01	3.18E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.55E-01	7.74E+01	3.30E-03	1.07E+02	2.39E-03	0.02%	0.04%
Nitrate	4.32E-01	mg/L	4.60E-01	mg/kg	0.00E+00	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	1.03E-01	1.08E-03	0.00E+00	0.00E+00	8.21E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	2.93E+01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	3.01E+02								7.02E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.02E+00	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E-04	mg/kg	#######			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.11E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.11E-06	2.14E+00	3.32E-06	1.07E+01	6.64E-07	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+02	0.00E+00	3.20E+02	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.62E-04	mg/kg	#######			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.32E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.32E-05	6.73E+00	3.45E-06	6.73E+01	3.45E-07	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-01	mg/kg	#######			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-02	6.73E+00	1.49E-03	6.73E+01	1.49E-04	0.01%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	7.70E-02	mg/kg	#######			3.00E-01	NA	3.19E+01	3.19E+01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E-04	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E-04	6.50E+01	1.68E-06	1.30E+02	8.40E-07	0.00%	0.00%
Selenium	3.90E-03	mg/L	7.65E-01	mg/kg	3.74E-01	mg/kg	#######	2.05E+02	4.50E+00	1.21E+00	4.93E-01	4.59E-01	4.59E-01	1.51E-01	1.51E-01	9.36E-04	1.80E-03	0.00E+00	0.00E+00	1.46E-01	2.14E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.51E-01	1.80E+00	8.40E-02	5.40E+00	2.80E-02	0.50%	0.49%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E+00	0.00E+00	5.44E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.30E+01	mg/kg	#######		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.34E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.34E-03	NA	NA	NA	NA	NA	NA
Sulfate	4.15E+01	mg/L	5.13E+01	mg/kg	1.30E+02	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	9.94E+00	1.21E-01	0.00E+00	0.00E+00	9.16E-01	1.84E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.12E+01	NA	NA	NA	NA	NA	NA
Thallium	5.86E-04	mg/L	4.92E-01	mg/kg	0.00E+00	mg/kg	#######	7.50E+01	4.50E+00							1.40E-04	1.16E-03	0.00E+00	0.00E+00	9.41E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.54E-02	3.50E-01	2.73E-01	1.05E+00	9.09E-02	1.62%	1.58%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E-05	2.14E+00	5.07E-06	1.07E+01	1.01E-06	0.00%	0.00%
Vanadium	4.29E-02	mg/L	0.00E+00	mg/kg	1.45E+01	mg/kg	#######	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	1.03E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.87E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.31E-02	1.14E+01	1.15E-03	3.42E+01	3.84E-04	0.01%	0.01%
Zinc	0.00E+00	mg/L	3.15E+01	mg/kg	4.79E+01	mg/kg	#######	2.91E+03	1.94E+00	6.34E+00	1.06E+00	8.84E-01	8.84E-01	1.84E-01	1.84E-01	0.00E+00	7.43E-02	0.00E+00	0.00E+00	2.60E+00	1.44E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.11E+00	1.45E+01	2.83E-01	1.31E+02	3.14E-02	1.69%	0.55%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	2.2E-05	4.5E-06	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	3.1E-02	3.1E-03	0.18%	0.05%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	2.6E-03	3.2E-04	0.02%	0.01%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	4.2E-02	1.4E-02	0.25%	0.24%
Aldrin/Dieldrin/Endrin EEQ:	1.3E-04	4.2E-05	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi \, x \, Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0.9	unitless
Terr. Invert diet fraction =	0.1	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0.000034365	kg/d
Food ingestion rate =	0.00069	kg/d
Body weight =	0.0146	kg
Home range =	247	acres
Water intake rate =	0.0035	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-125
Tier 1 COPCs
EEQs and Hazard Indices for the American Woodcock at LHAAP
Low Impact Sub-Area/Harrison Bayou Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF (Unitless)	Fish BAF (Unitless)	Aq. Invert. BAF (Unitless)	Terr. Invert. BAF (Unitless)	Aq. Plant BAF (Unitless)	Terr. Plant BAF (Unitless)	Plant Root BAF (Unitless)	Mammal BAF (Unitless)	Bird BAF (Unitless)
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00
2,3,7,8-TCDD TEQ	9.44E-09	mg/L	1.41E-05	mg/kg	3.95E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.40E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	4.30E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.23E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.87E-04	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.76E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Aluminum	2.03E+01	mg/L	1.03E+04	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	6.37E-01	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.07E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.42E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.11E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	7.47E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.50E-04	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00
Barium	0.00E+00	mg/L	2.86E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	6.80E-02	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.82E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00
Cadmium	0.00E+00	mg/L	1.83E-01	mg/kg	3.84E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.58E+01	1.33E+00	9.52E-01	9.52E-01	9.22E-01	9.22E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.88E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Chromium	1.27E-02	mg/L	0.00E+00	mg/kg	1.22E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Copper	1.69E-02	mg/L	7.78E+00	mg/kg	7.43E+00	mg/kg	1.00E+00	5.92E+03	5.25E+00	1.32E+00	5.59E-01	5.75E-01	5.75E-01	1.49E-01	1.49E-01
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.86E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.75E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.20E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00
Iron	2.91E+01	mg/L	0.00E+00	mg/kg	1.00E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01		
Lead	7.24E-03	mg/L	0.00E+00	mg/kg	2.51E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	4.39E-01	NA	6.40E-02	6.40E-02	1.33E-02	1.33E-02
Manganese	9.37E-01	mg/L	0.00E+00	mg/kg	9.35E+02	mg/kg	1.00E+00	2.00E+03	2.10E+00	2.21E-01	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.95E-02	mg/kg	1.00E+00		2.87E+00	7.16E+00	NA	1.35E+00	1.35E+00	1.03E-01	1.03E-01
Mercury (methyl)	0.00E+00	mg/L	8.29E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.16E+00	NA	NA		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.41E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00
Nickel	0.00E+00	mg/L	1.10E+01	mg/kg	7.10E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	5.96E-02	6.65E-02	6.65E-02	1.01E-01	1.01E-01
Nitrate	7.46E-01	mg/L	7.48E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Nitrate/Nitrite	5.84E+01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	8.83E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	4.23E-01	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.80E-01	mg/kg	1.00E+00			1.14E+00	NA	1.88E+01	1.88E+01	1.66E-01	1.66E-01
Selenium	4.63E-03	mg/L	9.08E-01	mg/kg	4.13E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.18E+00	5.02E-01	4.64E-01	4.64E-01	1.95E-01	1.95E-01
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Sulfate	5.76E+01	mg/L	7.51E+01	mg/kg	2.30E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Thallium	7.55E-04	mg/L	6.00E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.04E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Vanadium	6.18E-02	mg/L	0.00E+00	mg/kg	1.53E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03
Zinc	0.00E+00	mg/L	3.58E+01	mg/kg	5.89E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.53E+00	1.01E+00	8.08E-01	8.08E-01	4.51E-01	4.51E-01

Chemical	EED Surface Water (mg/kg-d)	EED Sediment (mg/kg-d)	EED Soil (mg/kg-d)	EED Fish (mg/kg-d)	EED Aq. Invert. (mg/kg-d)	EED Terr. Invert. (mg/kg-d)	EED Aq. Plants (mg/kg-d)	EED Terr. Plants (mg/kg-d)	EED Plant Roots (mg/kg-d)	EED Mammals (mg/kg-d)	EED Birds (mg/kg-d)	Total EED (mg/kg-d)	NOAEL (mg/kg-d)	EEQ N	LOAEL (mg/kg-d)	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.22E-01	0.00E+00	1.27E+00	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	9.44E-10	0.00E+00	1.13E-06	0.00E+00	0.00E+00	1.08E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E-05	1.40E-05	8.54E-01	1.40E-04	8.54E-02	5.98%	4.16%
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	0.00E+00	1.80E-05	0.00E+00	0.00E+00	2.68E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.70E-03	2.80E-03	9.65E-01	2.80E-02	9.65E-02	6.76%	4.70%
4,4'-DDE	0.00E+00	0.00E+00	5.52E-05	0.00E+00	0.00E+00	8.28E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.33E-03	5.80E-02	1.44E-01	5.80E-01	1.44E-02	1.01%	0.70%
4,4'-DDT	0.00E+00	0.00E+00	2.86E-05	0.00E+00	0.00E+00	4.43E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.45E-03	2.80E-03	1.59E+00	2.80E-02	1.59E-01	11.15%	7.75%
Aldrin	0.00E+00	0.00E+00	2.40E-06	0.00E+00	0.00E+00	3.71E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.73E-04	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	0.00E+00	4.83E-06	0.00E+00	0.00E+00	7.32E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.36E-04	2.14E+00	3.44E-04	1.07E+01	6.88E-05	0.00%	0.00%
Aluminum	2.03E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.03E+00	1.10E+02	1.85E-02	3.29E+02	6.17E-03	0.13%	0.30%
Antimony	0.00E+00	0.00E+00	8.18E-03	0.00E+00	0.00E+00	8.96E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.77E-02	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	0.00E+00	3.94E-05	0.00E+00	0.00E+00	5.98E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.02E-03	4.10E-01	1.47E-02	1.23E+00	4.90E-03	0.10%	0.24%
Aroclor 1248	0.00E+00	0.00E+00	1.82E-05	0.00E+00	0.00E+00	2.77E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.79E-03	1.80E-01	1.55E-02	1.80E+00	1.55E-03	0.11%	0.08%
Aroclor 1254	0.00E+00	0.00E+00	5.28E-05	0.00E+00	0.00E+00	8.22E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.27E-03	1.80E-01	4.60E-02	1.80E+00	4.60E-03	0.32%	0.22%
Aroclor 1260	0.00E+00	0.00E+00	9.59E-05	0.00E+00	0.00E+00	1.57E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.58E-02	1.80E-01	8.78E-02	1.80E+00	8.78E-03	0.62%	0.43%
Aroclor 1268	0.00E+00	0.00E+00	1.09E-05	0.00E+00	0.00E+00	1.47E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.48E-03	1.80E-01	8.22E-03	1.80E+00	8.22E-04	0.06%	0.04%
Barium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.08E+01	0.00E+00	4.17E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	0.00E+00	8.73E-04	0.00E+00	0.00E+00	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.12E-01	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E+00	0.00E+00	3.33E+00	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	0.00E+00	0.00E+00	4.93E-03	0.00E+00	0.00E+00	1.22E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.23E+00	1.45E+00	8.46E-01	2.00E+01	6.14E-02	5.93%	2.99%
Chlordane	0.00E+00	0.00E+00	2.41E-06	0.00E+00	0.00E+00	3.65E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.67E-04	2.14E+00	1.71E-04	1.07E+01	3.43E-05	0.00%	0.00%
Chromium	1.27E-03	0.00E+00	1.57E-01	0.00E+00	0.00E+00	4.78E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.93E+00	1.00E+00	4.93E+00	5.00E+00	9.87E-01	34.58%	48.07%
cis-Nonachlor	0.00E+00	0.00E+00	3.18E-06	0.00E+00	0.00E+00	4.81E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.85E-04	2.14E+00	2.26E-04	1.07E+01	4.53E-05	0.00%	0.00%
Copper	1.69E-03	0.00E+00	9.54E-02	0.00E+00	0.00E+00	1.21E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E+00	4.70E+01	2.78E-02	6.17E+01	2.11E-02	0.19%	1.03%
Dieldrin	0.00E+00	0.00E+00	2.38E-06	0.00E+00	0.00E+00	3.50E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.52E-04	7.70E-02	4.57E-03	2.31E-01	1.52E-03	0.03%	0.07%
Endrin	0.00E+00	0.00E+00	3.53E-06	0.00E+00	0.00E+00	5.19E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.22E-04	3.00E-01	1.74E-03	9.00E-01	5.80E-04	0.01%	0.03%
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.20E-01	0.00E+00	2.76E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	0.00E+00	2.83E-06	0.00E+00	0.00E+00	4.22E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.25E-04	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Iron	2.91E+00	0.00E+00	1.29E+02	0.00E+00	0.00E+00	9.65E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.28E+02	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	7.24E-04	0.00E+00	3.23E-01	0.00E+00	0.00E+00	1.36E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.69E+00	1.13E+00	1.49E+00	1.13E+01	1.49E-01	10.45%	7.27%
Manganese	9.37E-02	0.00E+00	1.20E+01	0.00E+00	0.00E+00	2.55E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.76E+01	9.77E+02	3.85E-02	9.77E+03	3.85E-03	0.27%	0.19%
Mercury (inorganic)	0.00E+00	0.00E+00	7.64E-04	0.00E+00	0.00E+00	5.26E-02	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.33E-02	4.50E-01	1.19E-01	9.00E-01	5.93E-02	0.83%	2.89%
Mercury (methyl)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	6.40E-03	0.00E+00	6.40E-02	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	0.00E+00	4.38E-06	0.00E+00	0.00E+00	6.83E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.88E-04	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	0.00E+00	9.12E-02	0.00E+00	0.00E+00	4.14E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.24E+00	7.74E+01	5.47E-02	1.07E+02	3.96E-02	0.38%	1.93%
Nitrate	7.46E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.46E-02	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	5.84E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.84E+00	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	0.00E+00	2.26E-06	0.00E+00	0.00E+00	3.32E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.34E-04	2.14E+00	1.56E-04	1.07E+01	3.12E-05	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+02	0.00E+00	3.20E+02	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	0.00E+00	1.13E-05	0.00E+00	0.00E+00	1.65E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.67E-03	6.73E+00	2.47E-04	6.73E+01	2.47E-05	0.00%	0.00%
Pentachlorophenol	0.00E+00	0.00E+00	5.43E-03	0.00E+00	0.00E+00	7.74E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.80E-01	6.73E+00	1.16E-01	6.73E+01	1.16E-02	0.81%	0.56%
Perchlorate	0.00E+00	0.00E+00	3.59E-03	0.00E+00	0.00E+00	3.94E-02	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.30E-02	6.50E+01	6.61E-04	1.30E+02	3.31E-04	0.00%	0.02%
Selenium	4.63E-04	0.00E+00	5.30E-03	0.00E+00	0.00E+00	6.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.57E-02	1.80E+00	3.65E-02	5.40E+00	1.22E-02	0.26%	0.59%
Silver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E+00	0.00E+00	5.44E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	0.00E+00	1.83E-01	0.00E+00	0.00E+00	4.89E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E-01	NA	NA	NA	NA	NA	NA
Sulfate	5.76E+00	0.00E+00	2.95E+00	0.00E+00	0.00E+00	3.23E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.11E+01	NA	NA	NA	NA	NA	NA
Thallium	7.55E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.55E-05	3.50E-01	2.16E-04	1.05E+00	7.19E-05	0.00%	0.00%
trans-Nonachlor	0.00E+00	0.00E+00	3.90E-06	0.00E+00	0.00E+00	5.90E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.94E-04	2.14E+00	2.78E-04	1.07E+01	5.55E-05	0.00%	0.00%
Vanadium	6.18E-03	0.00E+00	1.97E-01	0.00E+00	0.00E+00	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.70E-01	1.14E+01	3.24E-02	3.42E+01	1.08E-02	0.23%	0.53%
Zinc	0.00E+00	0.00E+00	7.56E-01	0.00E+00	0.00E+00	4.01E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.09E+01	1.45E+01	2.82E+00	1.31E+02	3.12E-01	19.76%	15.21%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.2E-03	2.4E-04	0.01%	0.01%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	2.7E+00	2.7E-01	18.92%	13.15%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.7E-01	2.1E-02	1.21%	1.01%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	6.3E-03	2.1E-03	0.04%	0.10%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	1	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.002529	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.0243	kg/d
Body weight =	0.197	kg
Home range =	0.74	acres
Water intake rate =	0.0197	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-126
Tier 2 COPCs
EEQs and Hazard Indices for the American Woodcock at LHAAP
Low Impact Sub-Area/Harrison Bayou Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF (Unitless)	Fish BAF (Unitless)	Aq. Invert. BAF (Unitless)	Terr. Invert. BAF (Unitless)	Aq. Plant BAF (Unitless)	Terr. Plant BAF (Unitless)	Plant Root BAF (Unitless)	Mammal BAF (Unitless)	Bird BAF (Unitless)	EED Surface Water mg/kg-d	EED Sediment mg/kg-d	EED Soil mg/kg-d	EED Fish mg/kg-d	EED Aq. Invert. mg/kg-d	EED Terr. Invert. mg/kg-d	EED Aq. Plants mg/kg-d	EED Terr. Plants mg/kg-d	EED Plant Roots mg/kg-d	EED Mammals mg/kg-d	EED Birds mg/kg-d	Total EED mg/kg-d	NOAEL mg/kg-d	EEQ N	LOAEL mg/kg-d	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.22E-01	0.00E+00	1.27E+00	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	8.00E-09	mg/L	4.00E-06	mg/kg	3.18E-06	mg/kg	#######	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	8.00E-10	0.00E+00	4.09E-08	0.00E+00	0.00E+00	4.32E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.36E-06	1.40E-05	3.12E-01	1.40E-04	3.12E-02	4.61%	3.76%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	8.00E-04	mg/kg	#######		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.03E-05	0.00E+00	0.00E+00	8.84E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.94E-04	2.80E-03	3.19E-01	2.80E-02	3.19E-02	4.72%	3.85%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	3.10E-03	mg/kg	#######		4.75E+00	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	3.98E-05	0.00E+00	0.00E+00	3.44E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.48E-03	5.80E-02	6.00E-02	5.80E-01	6.00E-03	0.89%	0.72%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.07E-03	mg/kg	#######		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	1.37E-05	0.00E+00	0.00E+00	1.22E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.24E-03	2.80E-03	4.41E-01	2.80E-02	4.41E-02	6.53%	5.32%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	#######			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.26E-06	0.00E+00	0.00E+00	2.01E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.03E-04	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.15E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.05E-06	0.00E+00	0.00E+00	3.53E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.57E-04	2.14E+00	1.67E-04	1.07E+01	3.34E-05	0.00%	0.00%
Aluminum	1.12E+01	mg/L	7.50E+03	mg/kg	0.00E+00	mg/kg	#######	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	1.12E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.12E+00	1.10E+02	1.02E-02	3.29E+02	3.41E-03	0.15%	0.41%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-01	mg/kg	#######			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	6.54E-03	0.00E+00	0.00E+00	1.88E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.54E-02	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.55E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.28E-05	0.00E+00	0.00E+00	2.87E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.90E-03	4.10E-01	7.08E-03	1.23E+00	2.36E-03	0.10%	0.28%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.21E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.55E-05	0.00E+00	0.00E+00	1.36E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.37E-03	1.80E-01	7.64E-03	1.80E+00	7.64E-04	0.11%	0.09%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	3.32E-03	mg/kg	#######		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	4.26E-05	0.00E+00	0.00E+00	3.83E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.87E-03	1.80E-01	2.15E-02	1.80E+00	2.15E-03	0.32%	0.26%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	4.07E-03	mg/kg	#######			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	5.23E-05	0.00E+00	0.00E+00	4.94E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.99E-03	1.80E-01	2.77E-02	1.80E+00	2.77E-03	0.41%	0.33%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	7.92E-04	mg/kg	#######			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.02E-05	0.00E+00	0.00E+00	7.89E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.99E-04	1.80E-01	4.44E-03	1.80E+00	4.44E-04	0.07%	0.05%
Barium	0.00E+00	mg/L	2.32E+02	mg/kg	0.00E+00	mg/kg	#######	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.08E+01	0.00E+00	4.17E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	5.10E-02	mg/kg	#######			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	6.55E-04	0.00E+00	0.00E+00	4.81E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.88E-02	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.33E-01	mg/kg	0.00E+00	mg/kg	#######	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E+00	0.00E+00	3.33E+00	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	0.00E+00	mg/L	1.83E-01	mg/kg	3.02E-01	mg/kg	#######	1.15E+03	6.00E-01	2.87E+01	1.33E+00	1.06E+00	1.06E+00	6.72E-01	6.72E-01	0.00E+00	0.00E+00	3.88E-03	0.00E+00	0.00E+00	1.07E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.08E+00	1.45E+00	7.42E-01	2.00E+01	5.38E-02	10.97%	6.49%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.22E-06	0.00E+00	0.00E+00	1.94E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.96E-04	2.14E+00	9.17E-05	1.07E+01	1.83E-05	0.00%	0.00%
Chromium	9.95E-03	mg/L	0.00E+00	mg/kg	1.10E+01	mg/kg	#######	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	9.95E-04	0.00E+00	1.42E-01	0.00E+00	0.00E+00	4.16E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.59E-01	1.00E+00	5.59E-01	5.00E+00	1.12E-01	8.26%	13.47%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.72E-06	0.00E+00	0.00E+00	2.38E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-04	2.14E+00	1.12E-04	1.07E+01	2.25E-05	0.00%	0.00%
Copper	1.19E-02	mg/L	6.82E+00	mg/kg	6.53E+00	mg/kg	#######	1.11E+03	1.56E+00	1.45E+00	6.06E-01	6.22E-01	6.22E-01	8.97E-02	8.97E-02	1.19E-03	0.00E+00	8.38E-02	0.00E+00	0.00E+00	1.17E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.26E+00	4.70E+01	2.67E-02	6.17E+01	2.04E-02	0.39%	2.45%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.72E-04	mg/kg	#######		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.21E-06	0.00E+00	0.00E+00	1.87E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.89E-04	7.70E-02	2.45E-03	2.31E-01	8.18E-04	0.04%	0.10%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-04	mg/kg	#######			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	3.05E-06	0.00E+00	0.00E+00	2.58E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.61E-04	3.00E-01	8.71E-04	9.00E-01	2.90E-04	0.01%	0.04%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.20E-01	0.00E+00	2.76E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.93E-04	mg/kg	#######			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.48E-06	0.00E+00	0.00E+00	2.13E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.16E-04	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Iron	1.61E+01	mg/L	0.00E+00	mg/kg	9.10E+03	mg/kg	#######	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	1.61E+00	0.00E+00	1.17E+02	0.00E+00	0.00E+00	4.04E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+02	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	5.66E-03	mg/L	0.00E+00	mg/kg	2.21E+01	mg/kg	#######	4.48E+02	7.10E-02	4.50E-01	NA	6.78E-02	6.78E-02	1.16E-02	1.16E-02	5.66E-04	0.00E+00	2.83E-01	0.00E+00	0.00E+00	1.23E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.51E+00	1.13E+00	1.34E+00	1.13E+01	1.34E-01	19.75%	16.12%
Manganese	6.92E-01	mg/L	0.00E+00	mg/kg	8.30E+02	mg/kg	#######	2.50E+02	4.20E-01	2.26E-01	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	6.92E-02	0.00E+00	1.07E+01	0.00E+00	0.00E+00	2.31E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.39E+01	9.77E+02	3.47E-02	9.77E+03	3.47E-03	0.51%	0.42%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-02	mg/kg	#######		1.14E+00	7.64E+00	NA	1.41E+00	1.41E+00	9.15E-02	9.15E-02	0.00E+00	0.00E+00	6.94E-04	0.00E+00	0.00E+00	5.09E-02	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.16E-02	4.50E-01	1.15E-01	9.00E-01	5.73E-02	1.69%	6.91%
Mercury (methyl)	0.00E+00	mg/L	6.13E-02	mg/kg	0.00E+00	mg/kg	#######		1.14E+00	NA	1.33E+00	NA	NA			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	6.40E-03	0.00E+00	6.40E-02	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.88E-04	mg/kg	#######			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.70E-06	0.00E+00	0.00E+00	3.33E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.37E-04	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	mg/L	9.70E+00	mg/kg	6.36E+00	mg/kg	#######		4.86E-01	1.06E+00	6.15E-02	6.84E-02	6.84E-02	8.71E-02	8.71E-02	0.00E+00	0.00E+00	8.16E-02	0.00E+00	0.00E+00	8.31E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.12E-01	7.74E+01	1.18E-02	1.07E+02	8.53E-03	0.17%	1.03%
Nitrate	4.32E-01	mg/L	4.60E-01	mg/kg	0.00E+00	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	4.32E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.32E-02	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	2.93E+01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	3.01E+02								2.93E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.93E+00	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E-04	mg/kg	#######			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.19E-06	0.00E+00	0.00E+00	1.85E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.88E-04	2.14E+00	8.77E-05	1.07E+01	1.75E-05	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+02	0.00E+00	3.20E+02	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.62E-04	mg/kg	#######			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	7.21E-06	0.00E+00	0.00E+00	6.06E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.14E-04	6.73E+00	9.12E-05	6.73E+01	9.12E-06	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-01	mg/kg	#######			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.18E-03	0.00E+00	0.00E+00	2.61E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.65E-01	6.73E+00	3.93E-02	6.73E+01	3.93E-03	0.58%	0.47%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	7.70E-02	mg/kg	#######			3.00E-01	NA	3.19E+01	3.19E+01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	9.89E-04	0.00E+00	0.00E+00	2.85E-03	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.84E-03	6.50E+01	5.91E-05	1.30E+02	2.95E-05	0.00%	0.00%
Selenium	3.90E-03	mg/L	7.65E-01	mg/kg	3.74E-01	mg/kg	#######	2.05E+02	4.50E+00	1.21E+00	4.93E-01	4.59E-01	4.59E-01	1.51E-01	1.51E-01	3.90E-04	0.00E+00	4.80E-03	0.00E+00	0.00E+00	5.58E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.10E-02	1.80E+00	3.39E-02	5.40E+00	1.13E-02	0.50%	1.36%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E+00	0.00E+00	5.44E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.30E+01	mg/kg	#######		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	1.67E-01	0.00E+00	0.00E+00	1.39E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.06E-01	NA	NA	NA	NA	NA	NA
Sulfate	4.15E+01	mg/L	5.13E+01	mg/kg	1.30E+02	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	4.15E+00	0.00E+00	1.67E+00	0.00E+00	0.00E+00	4.81E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.06E+01	NA	NA	NA	NA	NA	NA
Thallium	5.86E-04	mg/L	4.92E-01	mg/kg	0.00E+00	mg/kg	#######	7.50E+01	4.50E+00							5.86E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.86E-05	3.50E-01	1.67E-04	1.05E+00	5.58E-05	0.00%	0.01%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.24E-06	0.00E+00	0.00E+00	2.83E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.86E-04	2.14E+00	1.34E-04	1.07E+01	2.68E-05	0.00%	0.00%
Vanadium	4.29E-02	mg/L	0.00E+00	mg/kg	1.45E+01	mg/kg	#######	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	4.29E-03	0.00E+00	1.86E-01	0.00E+00	0.00E+00	7.50E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.65E-01	1.14E+01	2.32E-02	3.42E+01	7.75E-03	0.34%	0.93%
Zinc	0.00E+00	mg/L	3.15E+01	mg/kg	4.79E+01	mg/kg	#######	2.91E+03	1.94E+00	6.34E+00	1.06E+00	8.84E-01	8.84E-01	1.84E-01	1.84E-01	0.00E+00	0.00E+00	6.16E-01	0.00E+00	0.00E+00	3.75E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.81E+01	1.45E+01	2.63E+00	1.31E+02	2.91E-01	38.86%	35.09%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	5.9E-04	1.2E-04	0.01%	0.01%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	8.2E-01	8.2E-02	12.13%	9.90%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	6.8E-02	8.5E-03	1.01%	1.02%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	3.3E-03	1.1E-03	0.05%	0.13%

Intake Equation:

$$E_j = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi \times Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	1	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.002529	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.0243	kg/d
Body weight =	0.197	kg
Home range =	57	acres
Water intake rate =	0.0197	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-127
Tier 1 COPCs
EEQs and Hazard Indices for the Belted Kingfisher at LHAAP
Low Impact Sub-Area/Harrison Bayou Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
							---Unitless---								
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00
2,3,7,8-TCDD TEQ	9.44E-09	mg/L	1.41E-05	mg/kg	3.95E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.40E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	4.30E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.23E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.87E-04	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.76E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Aluminum	2.03E+01	mg/L	1.03E+04	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	6.37E-01	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.07E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.42E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.11E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	7.47E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.50E-04	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00
Barium	0.00E+00	mg/L	2.86E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	6.80E-02	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.82E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00
Cadmium	0.00E+00	mg/L	1.83E-01	mg/kg	3.84E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.58E+01	1.33E+00	9.52E-01	9.52E-01	9.22E-01	9.22E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.88E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Chromium	1.27E-02	mg/L	0.00E+00	mg/kg	1.22E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Copper	1.69E-02	mg/L	7.78E+00	mg/kg	7.43E+00	mg/kg	1.00E+00	5.92E+03	5.25E+00	1.32E+00	5.59E-01	5.75E-01	5.75E-01	1.49E-01	1.49E-01
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.86E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.75E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.20E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00
Iron	2.91E+01	mg/L	0.00E+00	mg/kg	1.00E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01		
Lead	7.24E-03	mg/L	0.00E+00	mg/kg	2.51E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	4.39E-01	NA	6.40E-02	6.40E-02	1.33E-02	1.33E-02
Manganese	9.37E-01	mg/L	0.00E+00	mg/kg	9.35E+02	mg/kg	1.00E+00	2.00E+03	2.10E+00	2.21E-01	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.95E-02	mg/kg	1.00E+00		2.87E+00	7.16E+00	NA	1.35E+00	1.35E+00	1.03E-01	1.03E-01
Mercury (methyl)	0.00E+00	mg/L	8.29E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.16E+00	NA	NA		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.41E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00
Nickel	0.00E+00	mg/L	1.10E+01	mg/kg	7.10E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	5.96E-02	6.65E-02	6.65E-02	1.01E-01	1.01E-01
Nitrate	7.46E-01	mg/L	7.48E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Nitrate/Nitrite	5.84E+01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	8.83E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	4.23E-01	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.80E-01	mg/kg	1.00E+00			1.14E+00	NA	1.88E+01	1.88E+01	1.66E-01	1.66E-01
Selenium	4.63E-03	mg/L	9.08E-01	mg/kg	4.13E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.18E+00	5.02E-01	4.64E-01	4.64E-01	1.95E-01	1.95E-01
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Sulfate	5.76E+01	mg/L	7.51E+01	mg/kg	2.30E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Thallium	7.55E-04	mg/L	6.00E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.04E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Vanadium	6.18E-02	mg/L	0.00E+00	mg/kg	1.53E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03
Zinc	0.00E+00	mg/L	3.58E+01	mg/kg	5.89E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.53E+00	1.01E+00	8.08E-01	8.08E-01	4.51E-01	4.51E-01

Chemical	EED Surface Water (mg/kg-d)	EED Sediment (mg/kg-d)	EED Soil (mg/kg-d)	EED Fish (mg/kg-d)	EED Aq. Invert. (mg/kg-d)	EED Terr. Invert. (mg/kg-d)	EED Aq. Plants (mg/kg-d)	EED Terr. Plants (mg/kg-d)	EED Plant Roots (mg/kg-d)	EED Mammals (mg/kg-d)	EED Birds (mg/kg-d)	Total EED (mg/kg-d)	NOAEL (mg/kg-d)	EEQ N	LOAEL (mg/kg-d)	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.22E-01	0.00E+00	1.27E+00	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	1.02E-09	9.86E-08	0.00E+00	1.96E-04	5.40E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.02E-04	1.40E-05	1.44E+01	1.40E-04	1.44E+00	43.88%	19.56%
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.80E-03	0.00E+00	2.80E-02	0.00E+00	0.00%	0.00%
4,4'-DDE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.80E-02	0.00E+00	5.80E-01	0.00E+00	0.00%	0.00%
4,4'-DDT	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.80E-03	0.00E+00	2.80E-02	0.00E+00	0.00%	0.00%
Aldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Aluminum	2.20E+00	7.18E+01	0.00E+00	1.07E+01	8.09E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.94E+02	1.10E+02	8.15E+00	3.29E+02	2.72E+00	24.80%	36.84%
Antimony	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.10E-01	0.00E+00	1.23E+00	0.00E+00	0.00%	0.00%
Aroclor 1248	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Aroclor 1254	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Aroclor 1260	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Aroclor 1268	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Barium	0.00E+00	2.00E+00	0.00E+00	0.00E+00	2.25E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.45E+01	2.08E+01	1.18E+00	4.17E+01	5.88E-01	3.59%	7.98%
Benzoic Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	1.97E-03	0.00E+00	0.00E+00	1.08E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E-01	1.11E+00	9.89E-02	3.33E+00	3.30E-02	0.30%	0.45%
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	0.00E+00	1.28E-03	0.00E+00	0.00E+00	2.56E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E-02	1.45E+00	1.85E-02	2.00E+01	1.34E-03	0.06%	0.02%
Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Chromium	1.37E-03	0.00E+00	0.00E+00	1.55E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.55E+00	1.00E+00	1.55E+00	5.00E+00	3.10E-01	4.72%	4.21%
cis-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Copper	1.83E-03	5.43E-02	0.00E+00	1.22E+01	7.14E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E+01	4.70E+01	2.77E-01	6.17E+01	2.11E-01	0.84%	2.86%
Dieldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.70E-02	0.00E+00	2.31E-01	0.00E+00	0.00%	0.00%
Endrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-02	0.00E+00	1.00E-01	0.00E+00	0.00%	0.00%
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.20E-01	0.00E+00	2.76E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Iron	3.15E+00	0.00E+00	0.00E+00	3.56E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.56E+03	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	7.83E-04	0.00E+00	0.00E+00	1.33E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E+00	3.85E+00	3.46E-01	1.16E+01	1.15E-01	1.05%	1.56%
Manganese	1.01E-01	0.00E+00	0.00E+00	2.29E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.29E+02	9.77E+02	2.35E-01	9.77E+03	2.35E-02	0.71%	0.32%
Mercury (inorganic)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.50E-01	0.00E+00	9.00E-01	0.00E+00	0.00%	0.00%
Mercury (methyl)	0.00E+00	5.79E-04	0.00E+00	0.00E+00	4.16E-03	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	4.74E-03	6.40E-03	7.40E-01	6.40E-02	7.40E-02	2.25%	1.00%
Mirex	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	7.68E-02	0.00E+00	0.00E+00	4.46E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.23E-01	7.74E+01	6.75E-03	1.07E+02	4.88E-03	0.02%	0.07%
Nitrate	8.06E-02	5.23E-03	0.00E+00	9.75E+01	2.75E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.76E+01	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	6.32E+00	0.00E+00	0.00E+00	7.64E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.64E+03	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+02	0.00E+00	3.20E+02	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E+00	0.00E+00	6.73E+01	0.00E+00	0.00%	0.00%
Pentachlorophenol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E+00	0.00E+00	6.73E+01	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.50E+01	0.00E+00	1.30E+02	0.00E+00	0.00%	0.00%
Selenium	5.00E-04	6.34E-03	0.00E+00	1.16E-01	7.14E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.94E-01	4.40E-01	4.42E-01	1.50E+00	1.30E-01	1.34%	1.76%
Silver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E+00	0.00E+00	5.44E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Sulfate	6.23E+00	5.25E-01	0.00E+00	7.53E+03	2.76E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.54E+03	NA	NA	NA	NA	NA	NA
Thallium	8.16E-05	4.19E-03	0.00E+00	1.47E+00	4.72E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E+00	3.50E-01	4.34E+00	1.05E+00	1.45E+00	13.22%	19.65%
trans-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Vanadium	6.68E-03	0.00E+00	0.00E+00	8.08E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.08E+00	1.14E+01	7.09E-01	3.42E+01	2.36E-01	2.16%	3.21%
Zinc	0.00E+00	2.50E-01	0.00E+00	0.00E+00	4.71E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.96E+00	1.45E+01	3.42E-01	1.31E+02	3.78E-02	1.04%	0.51%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	0.0E+00	0.0E+00	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	9.9E-02	3.3E-02	0.30%	0.45%
Aldrin/Dieldrin/Endrin EEQ:	0.0E+00	0.0E+00	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\,x\,Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text tables.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.875	unitless
Aq. Invert diet fraction =	0.125	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0.001034	kg/d
Food ingestion rate =	0.0207	kg/d
Body weight =	0.148	kg
Home range =	118.6101	acres
Water intake rate =	0.016	L/d
Site Area =	475	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

00050335

Table E-128
Tier 2 COPCs
EEQs and Hazard Indices for the Belted Kingfisher at LHAAP
Low Impact Sub-Area/Harrison Bayou Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							-----Unitless-----									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.22E-01	0.00E+00	1.27E+00	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	8.00E-09	mg/L	4.00E-06	mg/kg	3.18E-06	mg/kg	#######	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	2.22E-10	7.16E-09	0.00E+00	5.79E-06	8.37E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.88E-06	1.40E-05	4.20E-01	1.40E-04	4.20E-02	16.22%	5.46%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	8.00E-04	mg/kg	#######		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.80E-03	0.00E+00	2.80E-02	0.00E+00	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	3.10E-03	mg/kg	#######		4.75E+00	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.80E-02	0.00E+00	5.80E-01	0.00E+00	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.07E-03	mg/kg	#######		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.80E-03	0.00E+00	2.80E-02	0.00E+00	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	#######			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.15E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Aluminum	1.12E+01	mg/L	7.50E+03	mg/kg	0.00E+00	mg/kg	#######	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	3.11E-01	1.34E+01	0.00E+00	1.51E+00	1.51E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.67E+02	1.10E+02	1.52E+00	3.29E+02	5.06E-01	58.56%	65.69%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-01	mg/kg	#######			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.55E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.10E-01	0.00E+00	1.23E+00	0.00E+00	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.21E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	3.32E-03	mg/kg	#######		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	4.07E-03	mg/kg	#######			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	7.92E-04	mg/kg	#######			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Barium	0.00E+00	mg/L	2.32E+02	mg/kg	0.00E+00	mg/kg	#######	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	4.15E-01	0.00E+00	0.00E+00	4.67E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.08E+00	2.08E+01	2.44E-01	4.17E+01	1.22E-01	9.43%	15.83%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	5.10E-02	mg/kg	#######			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.33E-01	mg/kg	0.00E+00	mg/kg	#######	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	0.00E+00	4.16E-04	0.00E+00	0.00E+00	4.87E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.29E-03	1.11E+00	4.76E-03	3.33E+00	1.59E-03	0.18%	0.21%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	0.00E+00	mg/L	1.83E-01	mg/kg	3.02E-01	mg/kg	#######	1.15E+03	6.00E-01	2.87E+01	1.33E+00	1.06E+00	1.06E+00	6.72E-01	6.72E-01	0.00E+00	3.28E-04	0.00E+00	0.00E+00	4.92E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.20E-04	1.45E+00	5.65E-04	2.00E+01	4.10E-05	0.02%	0.01%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Chromium	9.95E-03	mg/L	0.00E+00	mg/kg	1.10E+01	mg/kg	#######	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	2.76E-04	0.00E+00	0.00E+00	1.12E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	1.00E+00	1.13E-01	5.00E+00	2.25E-02	4.35%	2.93%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Copper	1.19E-02	mg/L	6.82E+00	mg/kg	6.53E+00	mg/kg	#######	1.11E+03	1.56E+00	1.45E+00	6.06E-01	6.22E-01	6.22E-01	8.97E-02	8.97E-02	3.29E-04	1.22E-02	0.00E+00	4.14E-01	4.76E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.74E-01	4.70E+01	1.01E-02	6.17E+01	7.68E-03	0.39%	1.00%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.72E-04	mg/kg	#######		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.70E-02	0.00E+00	2.31E-01	0.00E+00	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-04	mg/kg	#######			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-02	0.00E+00	1.00E-01	0.00E+00	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.20E-01	0.00E+00	2.76E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.93E-04	mg/kg	#######			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Iron	1.61E+01	mg/L	0.00E+00	mg/kg	9.10E+03	mg/kg	#######	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	4.47E-01	0.00E+00	0.00E+00	1.27E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E+02	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	5.66E-03	mg/L	0.00E+00	mg/kg	2.21E+01	mg/kg	#######	4.48E+02	7.10E-02	4.50E-01	NA	6.78E-02	6.78E-02	1.16E-02	1.16E-02	1.57E-04	0.00E+00	0.00E+00	7.96E-02	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.97E-02	3.85E+00	2.07E-02	1.16E+01	6.90E-03	0.80%	0.90%
Manganese	6.92E-01	mg/L	0.00E+00	mg/kg	8.30E+02	mg/kg	#######	2.50E+02	4.20E-01	2.26E-01	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	1.92E-02	0.00E+00	0.00E+00	5.42E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E+00	9.77E+02	5.57E-03	9.77E+03	5.57E-04	0.21%	0.07%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-02	mg/kg	#######		1.14E+00	7.64E+00	NA	1.41E+00	1.41E+00	9.15E-02	9.15E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.50E-01	0.00E+00	9.00E-01	0.00E+00	0.00%	0.00%
Mercury (methyl)	0.00E+00	mg/L	6.13E-02	mg/kg	0.00E+00	mg/kg	#######		1.14E+00	NA	1.33E+00	NA	NA			0.00E+00	1.10E-04	0.00E+00	0.00E+00	3.12E-04	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	4.21E-04	6.40E-03	6.59E-02	6.40E-02	6.59E-03	2.54%	0.86%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.88E-04	mg/kg	#######			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	mg/L	9.70E+00	mg/kg	6.36E+00	mg/kg	#######		4.86E-01	1.06E+00	6.15E-02	6.84E-02	6.84E-02	8.71E-02	8.71E-02	0.00E+00	1.74E-02	0.00E+00	0.00E+00	2.11E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.85E-02	7.74E+01	4.97E-04	1.07E+02	3.60E-04	0.02%	0.05%
Nitrate	4.32E-01	mg/L	4.60E-01	mg/kg	0.00E+00	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	1.20E-02	8.23E-04	0.00E+00	4.07E+00	8.65E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.09E+00	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	2.93E+01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	3.01E+02								8.12E-01	0.00E+00	0.00E+00	2.76E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.77E+02	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E-04	mg/kg	#######			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+02	0.00E+00	3.20E+02	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.62E-04	mg/kg	#######			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E+00	0.00E+00	6.73E+01	0.00E+00	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-01	mg/kg	#######			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E+00	0.00E+00	6.73E+01	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	7.70E-02	mg/kg	#######			3.00E-01	NA	3.19E+01	3.19E+01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.50E+01	0.00E+00	1.30E+02	0.00E+00	0.00%	0.00%
Selenium	3.90E-03	mg/L	7.65E-01	mg/kg	3.74E-01	mg/kg	#######	2.05E+02	4.50E+00	1.21E+00	4.93E-01	4.59E-01	4.59E-01	1.51E-01	1.51E-01	1.08E-04	1.37E-03	0.00E+00	2.51E-02	1.54E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.20E-02	4.40E-01	9.55E-02	1.50E+00	2.80E-02	3.68%	3.64%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E+00	0.00E+00	5.44E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.30E+01	mg/kg	#######		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Sulfate	4.15E+01	mg/L	5.13E+01	mg/kg	1.30E+02	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	1.15E+00	9.18E-02	0.00E+00	3.92E+02	9.65E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.93E+02	NA	NA	NA	NA	NA	NA
Thallium	5.86E-04	mg/L	4.92E-01	mg/kg	0.00E+00	mg/kg	#######	7.50E+01	4.50E+00							1.62E-05	8.80E-04	0.00E+00	1.38E-03	9.92E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.22E-02	3.50E-01	3.48E-02	1.05E+00	1.16E-02	1.34%	1.51%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Vanadium	4.29E-02	mg/L	0.00E+00	mg/kg	1.45E+01	mg/kg	#######	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	1.19E-03	0.00E+00	0.00E+00	4.04E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.06E-01	1.14E+01	3.56E-02	3.42E+01	1.19E-02	1.37%	1.54%
Zinc	0.00E+00	mg/L	3.15E+01	mg/kg	4.79E+01	mg/kg	#######	2.91E+03	1.94E+00	6.34E+00	1.06E+00	8.84E-01	8.84E-01	1.84E-01	1.84E-01	0.00E+00	5.65E-02	0.00E+00	0.00E+00	2.74E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.30E-01	1.45E+01	2.28E-02	1.31E+02	2.52E-03	0.88%	0.33%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	0.0E+00	0.0E+00	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	4.8E-03	1.6E-03	0.18%	0.21%
Aldrin/Dieldrin/Endrin EEQ:	0.0E+00	0.0E+00	0.00%	0.00%

Intake Equation:

$$E_j = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi \, x \, Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.875	unitless
Aq. Invert diet fraction =	0.125	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0.001034	kg/d
Food ingestion rate =	0.0207	kg/d
Body weight =	0.148	kg
Home range =	1853	acres
Water intake rate =	0.016	L/d
Site Area =	475	acres
Area Use Factor (AUF) =	0.256341	unitless
Exposure Duration (ED) =	1	unitless

Table E-129
Tier 1 COPCs
EEQs and Hazard Indices for the Red-tailed Hawk at LHAAP
Low Impact Sub-Area/Harrison Bayou Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL		LOAEL		Percent Contribution to	Percent Contribution to
							-----	-----	-----	-----	Unitless	-----	-----	-----	-----	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	EEQ N	mg/kg-d	EEQ L	EEQ N	EEQ L
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.22E-01	0.00E+00	1.27E+00	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	9.44E-09	mg/L	1.41E-05	mg/kg	3.95E-06	mg/kg	#######	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	5.36E-10	0.00E+00	2.38E-09	1.26E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.56E-09	7.96E-10	1.26E-05	1.40E-05	8.98E-01	1.40E-04	8.98E-02	55.73%	31.91%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.40E-03	mg/kg	#######		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	8.43E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.06E-05	5.35E-06	3.68E-05	2.80E-03	1.31E-02	2.80E-02	1.31E-03	0.82%	0.47%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	4.30E-03	mg/kg	#######		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	2.59E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.11E-05	1.42E-05	9.78E-05	5.80E-02	1.69E-03	5.80E-01	1.69E-04	0.10%	0.06%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.23E-03	mg/kg	#######		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	0.00E+00	1.34E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.03E-05	1.23E-05	8.39E-05	2.80E-03	3.00E-02	2.80E-02	3.00E-03	1.86%	1.07%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.87E-04	mg/kg	#######			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.13E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.09E-06	7.14E-07	4.92E-06	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.76E-04	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.27E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.22E-06	1.44E-06	9.89E-06	2.14E+00	4.62E-06	1.07E+01	9.24E-07	0.00%	0.00%
Aluminum	2.03E+01	mg/L	1.03E+04	mg/kg	0.00E+00	mg/kg	#######	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	1.15E+00	0.00E+00	0.00E+00	6.84E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.84E+00	1.10E+02	1.68E-02	3.29E+02	5.59E-03	1.04%	1.99%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	6.37E-01	mg/kg	#######			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	3.83E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.01E-03	3.51E-04	2.74E-03	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.07E-03	mg/kg	#######			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.85E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.71E-05	1.17E-05	8.06E-05	4.10E-01	1.97E-04	1.23E+00	6.56E-05	0.01%	0.02%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.42E-03	mg/kg	#######			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	8.54E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.10E-05	5.42E-06	3.73E-05	1.80E-01	2.07E-04	1.80E+00	2.07E-05	0.01%	0.01%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.11E-03	mg/kg	#######		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	0.00E+00	2.47E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.28E-05	1.45E-05	9.97E-05	1.80E-01	5.54E-04	1.80E+00	5.54E-05	0.03%	0.02%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	7.47E-03	mg/kg	#######			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	4.50E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.72E-04	4.75E-05	3.24E-04	1.80E-01	1.80E-03	1.80E+00	1.80E-04	0.11%	0.06%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.50E-04	mg/kg	#######			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	5.12E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.86E-05	3.24E-06	2.23E-05	1.80E-01	1.24E-04	1.80E+00	1.24E-05	0.01%	0.00%
Barium	0.00E+00	mg/L	2.86E+02	mg/kg	0.00E+00	mg/kg	#######	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.08E+01	0.00E+00	4.17E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	6.80E-02	mg/kg	#######			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.09E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.49E-03	2.59E-04	1.79E-03	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.82E-01	mg/kg	0.00E+00	mg/kg	#######	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E+00	0.00E+00	3.33E+00	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	0.00E+00	mg/L	1.83E-01	mg/kg	3.84E-01	mg/kg	#######	1.63E+03	7.99E+00	2.58E+01	1.33E+00	9.52E-01	9.52E-01	9.22E-01	9.22E-01	0.00E+00	0.00E+00	2.31E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.72E-03	1.17E-03	8.12E-03	1.45E+00	5.60E-03	2.00E+01	4.06E-04	0.35%	0.14%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.88E-04	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.13E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.10E-06	7.16E-07	4.93E-06	2.14E+00	2.30E-06	1.07E+01	4.60E-07	0.00%	0.00%
Chromium	1.27E-02	mg/L	0.00E+00	mg/kg	1.22E+01	mg/kg	#######	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	7.20E-04	0.00E+00	7.37E-03	9.92E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.74E-02	1.35E-02	1.98E-01	1.00E+00	1.98E-01	5.00E+00	3.96E-02	12.30%	14.09%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-04	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.49E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.41E-06	9.45E-07	6.51E-06	2.14E+00	3.04E-06	1.07E+01	6.08E-07	0.00%	0.00%
Copper	1.69E-02	mg/L	7.78E+00	mg/kg	7.43E+00	mg/kg	#######	5.92E+03	5.25E+00	1.32E+00	5.59E-01	5.75E-01	5.75E-01	1.49E-01	1.49E-01	9.60E-04	0.00E+00	4.47E-03	7.82E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.11E-02	3.68E-03	8.12E-01	4.70E+01	1.73E-02	6.17E+01	1.32E-02	1.07%	4.68%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.86E-04	mg/kg	#######		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.12E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.06E-06	7.08E-07	4.88E-06	7.70E-02	6.33E-05	2.31E-01	2.11E-05	0.00%	0.01%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.75E-04	mg/kg	#######			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	1.66E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.35E-06	1.11E-06	7.63E-06	1.00E-02	7.63E-04	1.00E-01	7.63E-05	0.05%	0.03%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.20E-01	0.00E+00	2.76E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.20E-04	mg/kg	#######			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.33E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.82E-06	8.41E-07	5.79E-06	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Iron	2.91E+01	mg/L	0.00E+00	mg/kg	1.00E+04	mg/kg	#######	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	1.65E+00	0.00E+00	6.04E+00	2.28E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.94E-01	6.87E-02	2.36E+02	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	7.24E-03	mg/L	0.00E+00	mg/kg	2.51E+01	mg/kg	#######	1.50E+03	6.07E-01	4.39E-01	NA	6.40E-02	6.40E-02	1.33E-02	1.33E-02	4.12E-04	0.00E+00	1.51E-02	8.50E-02	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	6.34E-03	1.11E-03	1.08E-01	3.85E+00	2.81E-02	1.16E+01	9.35E-03	1.74%	3.33%
Manganese	9.37E-01	mg/L	0.00E+00	mg/kg	9.35E+02	mg/kg	#######	2.00E+03	2.10E+00	2.21E-01	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	5.33E-02	0.00E+00	5.63E-01	1.47E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.70E-01	2.97E-02	1.55E+01	9.77E+02	1.58E-02	9.77E+03	1.58E-03	0.98%	0.56%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.95E-02	mg/kg	#######		2.87E+00	7.16E+00	NA	1.35E+00	1.35E+00	1.03E-01	1.03E-01	0.00E+00	0.00E+00	3.58E-05	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	1.16E-04	2.03E-05	1.72E-04	4.50E-01	3.83E-04	9.00E-01	1.92E-04	0.02%	0.07%
Mercury (methyl)	0.00E+00	mg/L	8.29E-02	mg/kg	0.00E+00	mg/kg	#######		2.87E+00	NA	1.16E+00	NA	NA			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	6.40E-03	0.00E+00	6.40E-02	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.41E-04	mg/kg	#######			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.05E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.46E-06	1.30E-06	8.97E-06	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	mg/L	1.10E+01	mg/kg	7.10E+00	mg/kg	#######		2.32E+00	4.73E+00	5.96E-02	6.65E-02	6.65E-02	1.01E-01	1.01E-01	0.00E+00	0.00E+00	4.28E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E-02	2.38E-03	2.03E-02	7.74E+01	2.62E-04	1.07E+02	1.89E-04	0.02%	0.07%
Nitrate	7.46E-01	mg/L	7.48E-01	mg/kg	0.00E+00	mg/kg	#######	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	4.24E-02	0.00E+00	0.00E+00	6.23E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.28E+00	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	5.84E+01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	1.07E+03								3.32E+00	0.00E+00	0.00E+00	4.88E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.92E+02	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	#######			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.06E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.84E-06	6.71E-07	4.62E-06	2.14E+00	2.16E-06	1.07E+01	4.32E-07	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+02	0.00E+00	3.20E+02	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	8.83E-04	mg/kg	#######			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	5.32E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.93E-05	3.37E-06	2.32E-05	6.73E+00	3.45E-06	6.73E+01	3.45E-07	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	4.23E-01	mg/kg	#######			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.54E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.24E-03	1.61E-03	1.11E-02	6.73E+00	1.65E-03	6.73E+01	1.65E-04	0.10%	0.06%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.80E-01	mg/kg	#######			1.14E+00	NA	1.88E+01	1.88E+01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	1.69E-04	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	8.83E-04	1.54E-04	1.21E-03	6.50E+01	1.85E-05	1.30E+02	9.27E-06	0.00%	0.00%
Selenium	4.63E-03	mg/L	9.08E-01	mg/kg	4.13E-01	mg/kg	#######	2.05E+02	4.50E+00	1.18E+00	5.02E-01	4.64E-01	4.64E-01	1.95E-01	1.95E-01	2.63E-04	0.00E+00	2.48E-04	7.42E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.53E-03	2.66E-04	9.73E-03	4.40E-01	2.21E-02	1.50E+00	6.48E-03	1.37%	2.30%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E+00	0.00E+00	5.44E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+01	mg/kg	#######		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	8.59E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.50E-02	7.85E-03	6.14E-02	NA	NA	NA	NA	NA	NA
Sulfate	5.76E+01	mg/L	7.51E+01	mg/kg	2.30E+02	mg/kg	#######	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	3.27E+00	0.00E+00	1.38E-01	4.82E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.25E-01	1.27E-01	4.86E+02	NA	NA	NA	NA	NA	NA
Thallium	7.55E-04	mg/L	6.00E-01	mg/kg	0.00E+00	mg/kg	#######	1.59E+04	4.50E+00							4.29E-05	0.00E+00	0.00E+00	9.40E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.40E-02	3.50E-01	2.69E-01	1.05E+00	8.95E-02	16.68%	31.83%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.04E-04	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.83E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.63E-06	1.16E-06	7.98E-06	2.14E+00	3.73E-06	1.07E+01	7.45E-07	0.00%	0.00%
Vanadium	6.18E-02	mg/L	0.00E+00	mg/kg	1.53E+01	mg/kg	#######	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	3.51E-03	0.00E+00	9.23E-03	5.17E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.72E-03	3.01E-04	5.31E-01	1.14E+01	4.66E-02	3.42E+01	1.55E-02	2.89%	5.52%
Zinc	0.00E+00	mg/L	3.58E+01	mg/kg	5.89E+01	mg/kg	#######	5.00E+03	7.53E+00	5.53E+00	1.01E+00	8.08E-01	8.08E-01	4.51E-01	4.51E-01	0.00E+00	0.00E+00	3.54E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.03E-01	8.79E-02	6.27E-01	1.45E+01	4.32E-02	1.31E+02	4.78E-03	2.68%	1.70%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.6E-05	3.2E-06	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	4.5E-02	4.5E-03	2.78%	1.59%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	2.9E-03	3.3E-04	0.18%	0.12%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	8.3E-04	9.7E-05	0.05%	0.03%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi x Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.26	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0.63	unitless
Bird diet fraction =	0.11	unitless
Soil ingestion rate =	0.000678	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.0339	kg/d
Body weight =	1.126	kg
Home range =	941	acres
Water intake rate =	0.064	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-130
Tier 2 COPCs
EEQs and Hazard Indices for the Red-tailed Hawk at LHAAP
Low Impact Sub-Area/Harrison Bayou Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water (mg/kg-d)	EED Sediment (mg/kg-d)	EED Soil (mg/kg-d)	EED Fish (mg/kg-d)	EED Aq. Invert. (mg/kg-d)	EED Terr. Invert. (mg/kg-d)	EED Aq. Plants (mg/kg-d)	EED Terr. Plants (mg/kg-d)	EED Plant Roots (mg/kg-d)	EED Mammals (mg/kg-d)	EED Birds (mg/kg-d)	Total EED (mg/kg-d)	NOAEL (mg/kg-d)	EEQ N	LOAEL (mg/kg-d)	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							---Unitless---																										
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.22E-01	0.00E+00	1.27E+00	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	8.00E-09	mg/L	4.00E-06	mg/kg	3.18E-06	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	4.55E-10	0.00E+00	1.92E-09	1.45E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.85E-09	4.98E-10	1.45E-06	1.40E-05	1.04E-01	1.40E-04	1.04E-02	41.49%	23.95%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	8.00E-04	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.82E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E-05	2.32E-06	1.61E-05	2.80E-03	5.75E-03	2.80E-02	5.75E-04	2.30%	1.33%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	3.10E-03	mg/kg	1.00E+00		4.75E+00	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	1.87E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.54E-05	9.67E-06	6.69E-05	5.80E-02	1.15E-03	5.80E-01	1.15E-04	0.46%	0.27%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.07E-03	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	6.43E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-05	3.14E-06	2.17E-05	2.80E-03	7.77E-03	2.80E-02	7.77E-04	3.11%	1.79%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.06E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.93E-06	5.11E-07	3.54E-06	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.15E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.90E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.24E-06	9.15E-07	6.34E-06	2.14E+00	2.96E-06	1.07E+01	5.93E-07	0.00%	0.00%
Aluminum	1.12E+01	mg/L	7.50E+03	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	6.38E-01	0.00E+00	0.00E+00	3.78E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.02E+00	1.10E+02	9.26E-03	3.29E+02	3.09E-03	3.71%	7.13%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-01	mg/kg	1.00E+00			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	3.07E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E-03	1.87E-04	1.56E-03	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.55E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.54E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.24E-05	7.41E-06	5.14E-05	4.10E-01	1.25E-04	1.23E+00	4.18E-05	0.05%	0.10%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.21E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	7.27E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.01E-05	3.51E-06	2.43E-05	1.80E-01	1.35E-04	1.80E+00	1.35E-05	0.05%	0.03%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	3.32E-03	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	2.00E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.13E-05	5.47E-06	3.88E-05	1.80E-01	2.15E-04	1.80E+00	2.15E-05	0.09%	0.05%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	4.07E-03	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	2.45E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.29E-04	2.25E-05	1.54E-04	1.80E-01	8.55E-04	1.80E+00	8.55E-05	0.34%	0.20%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	7.92E-04	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.77E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.32E-05	2.30E-06	1.59E-05	1.80E-01	8.86E-05	1.80E+00	8.86E-06	0.04%	0.02%
Barium	0.00E+00	mg/L	2.32E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.08E+01	0.00E+00	4.17E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	5.10E-02	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.07E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.48E-04	1.48E-04	1.03E-03	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.33E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E+00	0.00E+00	3.33E+00	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	0.00E+00	mg/L	1.83E-01	mg/kg	3.02E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	2.87E+01	1.33E+00	1.06E+00	1.06E+00	6.72E-01	6.72E-01	0.00E+00	0.00E+00	1.82E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.86E-03	6.74E-04	4.71E-03	1.45E+00	3.25E-03	2.00E+01	2.36E-04	1.30%	0.54%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.04E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.88E-06	5.02E-07	3.48E-06	2.14E+00	1.63E-06	1.07E+01	3.25E-07	0.00%	0.00%
Chromium	9.95E-03	mg/L	0.00E+00	mg/kg	1.10E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	5.65E-04	0.00E+00	6.63E-03	2.80E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.77E-02	3.09E-03	5.60E-02	1.00E+00	5.60E-02	5.00E+00	1.12E-02	22.42%	25.88%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.28E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.52E-06	6.15E-07	4.27E-06	2.14E+00	1.99E-06	1.07E+01	3.99E-07	0.00%	0.00%
Copper	1.19E-02	mg/L	6.82E+00	mg/kg	6.53E+00	mg/kg	1.00E+00	1.11E+03	1.56E+00	1.45E+00	6.06E-01	6.22E-01	6.22E-01	8.97E-02	8.97E-02	6.75E-04	0.00E+00	3.93E-03	1.03E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E-02	1.94E-03	1.21E-01	4.70E+01	2.57E-03	6.17E+01	1.96E-03	1.03%	4.53%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.72E-04	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.03E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.86E-06	4.99E-07	3.46E-06	7.70E-02	4.49E-05	2.31E-01	1.50E-05	0.02%	0.03%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	1.43E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.48E-06	9.56E-07	6.58E-06	1.00E-02	6.58E-04	1.00E-01	6.58E-05	0.26%	0.15%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.20E-01	0.00E+00	2.76E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.93E-04	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.16E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.21E-06	5.60E-07	3.89E-06	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Iron	1.61E+01	mg/L	0.00E+00	mg/kg	9.10E+03	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	9.17E-01	0.00E+00	5.48E+00	3.16E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.03E-01	5.30E-02	3.83E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	5.66E-03	mg/L	0.00E+00	mg/kg	2.21E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	4.50E-01	NA	6.78E-02	6.78E-02	1.16E-02	1.16E-02	3.22E-04	0.00E+00	1.33E-02	1.99E-02	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	4.88E-03	8.51E-04	3.92E-02	3.85E+00	1.02E-02	1.16E+01	3.39E-03	4.07%	7.84%
Manganese	6.92E-01	mg/L	0.00E+00	mg/kg	8.30E+02	mg/kg	1.00E+00	2.50E+02	4.20E-01	2.26E-01	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	3.93E-02	0.00E+00	4.99E-01	1.35E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.19E-01	2.08E-02	2.03E+00	9.77E+02	2.08E-03	9.77E+03	2.08E-04	0.83%	0.48%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-02	mg/kg	1.00E+00		1.14E+00	7.64E+00	NA	1.41E+00	1.41E+00	9.15E-02	9.15E-02	0.00E+00	0.00E+00	3.25E-05	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	9.37E-05	1.64E-05	1.43E-04	4.50E-01	3.17E-04	9.00E-01	1.58E-04	0.13%	0.37%
Mercury (methyl)	0.00E+00	mg/L	6.13E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	1.33E+00	NA	NA			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	6.40E-03	0.00E+00	6.40E-02	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.88E-04	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.74E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.80E-06	8.37E-07	5.81E-06	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	mg/L	9.70E+00	mg/kg	6.36E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	6.15E-02	6.84E-02	6.84E-02	8.71E-02	8.71E-02	0.00E+00	0.00E+00	3.83E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E-02	1.83E-03	1.62E-02	7.74E+01	2.09E-04	1.07E+02	1.51E-04	0.08%	0.35%
Nitrate	4.32E-01	mg/L	4.60E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	2.45E-02	0.00E+00	0.00E+00	1.02E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.04E+00	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	2.93E+01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02								1.66E+00	0.00E+00	0.00E+00	6.90E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.06E+01	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E-04	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.03E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.84E-06	4.95E-07	3.43E-06	2.14E+00	1.60E-06	1.07E+01	3.21E-07	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+02	0.00E+00	3.20E+02	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.62E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.38E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.34E-06	1.63E-06	1.13E-05	6.73E+00	1.68E-06	6.73E+01	1.68E-07	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-01	mg/kg	1.00E+00			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.49E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.11E-03	7.18E-04	4.98E-03	6.73E+00	7.40E-04	6.73E+01	7.40E-05	0.30%	0.17%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	7.70E-02	mg/kg	1.00E+00			3.00E-01	NA	3.19E+01	3.19E+01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	4.64E-05	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	1.62E-04	2.82E-05	2.36E-04	6.50E+01	3.64E-06	1.30E+02	1.82E-06	0.00%	0.00%
Selenium	3.90E-03	mg/L	7.65E-01	mg/kg	3.74E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.21E+00	4.93E-01	4.59E-01	4.59E-01	1.51E-01	1.51E-01	2.22E-04	0.00E+00	2.25E-04	6.26E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E-03	1.87E-04	7.97E-03	4.40E-01	1.81E-02	1.50E+00	5.31E-03	7.25%	12.27%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E+00	0.00E+00	5.44E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.30E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	7.82E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.73E-02	4.76E-03	3.99E-02	NA	NA	NA	NA	NA	NA
Sulfate	4.15E+01	mg/L	5.13E+01	mg/kg	1.30E+02	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	2.36E+00	0.00E+00	7.82E-02	9.77E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.73E-01	4.77E-02	1.00E+02	NA	NA	NA	NA	NA	NA
Thallium	5.86E-04	mg/L	4.92E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00							3.33E-05	0.00E+00	0.00E+00	3.44E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.77E-04	3.50E-01	1.08E-03	1.05E+00	3.59E-04	0.43%	0.83%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.52E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.20E-06	7.33E-07	5.08E-06	2.14E+00	2.38E-06	1.07E+01	4.75E-07	0.00%	0.00%
Vanadium	4.29E-02	mg/L	0.00E+00	mg/kg	1.45E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	2.44E-03	0.00E+00	8.71E-03	1.01E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.51E-03	2.63E-04	1.14E-01	1.14E+01	9.99E-03	3.42E+01	3.33E-03	4.00%	7.69%
Zinc	0.00E+00	mg/L	3.15E+01	mg/kg	4.79E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	6.34E+00	1.06E+00	8.84E-01	8.84E-01	1.84E-01	1.84E-01	0.00E+00	0.00E+00	2.89E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.67E-01	2.92E-02	2.26E-01	1.45E+01	1.56E-02	1.31E+02	1.72E-03	6.23%	3.98%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.1E-05	2.1E-06	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	1.5E-02	1.5E-03	5.87%	3.39%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.4E-03	1.7E-04	0.57%	0.40%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	7.0E-04	8.1E-05	0.28%	0.19%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\,x\,Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text tables.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.26	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0.63	unitless
Bird diet fraction =	0.11	unitless
Soil ingestion rate =	0.000678	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.0339	kg/d
Body weight =	1.126	kg
Home range =	1722	acres
Water intake rate =	0.064	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-131
Tier 1 COPCs
EEQs and Hazard Indices for the Deer Mouse at LHAAP
Low Impact Sub-Area/Saunders Branch Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF (Unitless)	Fish BAF (Unitless)	Aq. Invert. BAF (Unitless)	Terr. Invert. BAF (Unitless)	Aq. Plant BAF (Unitless)	Terr. Plant BAF (Unitless)	Plant Root BAF (Unitless)	Mammal BAF (Unitless)	Bird BAF (Unitless)	EED Surface Water mg/kg-d	EED Sediment mg/kg-d	EED Soil mg/kg-d	EED Fish mg/kg-d	EED Aq. Invert. mg/kg-d	EED Terr. Invert. mg/kg-d	EED Aq. Plants mg/kg-d	EED Terr. Plants mg/kg-d	EED Plant Roots mg/kg-d	EED Mammals mg/kg-d	EED Birds mg/kg-d	Total EED mg/kg-d	NOAEL mg/kg-d	EEQ N	LOAEL mg/kg-d	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg				1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	0.00E+00	mg/L	6.98E-06	mg/kg	3.95E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	0.00E+00	0.00E+00	7.32E-09	0.00E+00	0.00E+00	4.07E-06	0.00E+00	8.32E-10	0.00E+00	0.00E+00	0.00E+00	4.08E-06	1.00E-06	4.08E+00	1.00E-05	4.08E-01	50.78%	36.27%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.40E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.60E-06	0.00E+00	0.00E+00	1.01E-03	0.00E+00	5.20E-06	0.00E+00	0.00E+00	0.00E+00	1.02E-03	8.00E-01	1.27E-03	4.00E+00	2.54E-04	0.02%	0.02%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	4.30E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	7.98E-06	0.00E+00	0.00E+00	3.11E-03	0.00E+00	1.24E-04	0.00E+00	0.00E+00	0.00E+00	3.24E-03	8.00E-01	4.05E-03	4.00E+00	8.11E-04	0.05%	0.07%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.23E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	0.00E+00	4.13E-06	0.00E+00	0.00E+00	1.66E-03	0.00E+00	8.27E-06	0.00E+00	0.00E+00	0.00E+00	1.68E-03	8.00E-01	2.09E-03	4.00E+00	4.19E-04	0.03%	0.04%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.87E-04	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.47E-07	0.00E+00	0.00E+00	1.39E-04	0.00E+00	5.88E-08	0.00E+00	0.00E+00	0.00E+00	1.40E-04	2.00E-01	6.99E-04	1.00E+00	1.40E-04	0.01%	0.01%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.76E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	6.98E-07	0.00E+00	0.00E+00	2.75E-04	0.00E+00	7.03E-07	0.00E+00	0.00E+00	0.00E+00	2.76E-04	4.58E+00	6.03E-05	9.16E+00	3.02E-05	0.00%	0.00%
Aluminum	0.00E+00	mg/L	1.63E+04	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.93E+00	0.00E+00	1.93E+01	0.00E+00	0.00%	0.00%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	6.37E-01	mg/kg				1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.37E-02	0.00E+00	2.07E-03	0.00E+00	0.00E+00	0.00E+00	3.57E-02	1.25E-01	2.86E-01	1.25E+00	2.86E-02	3.56%	2.54%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.07E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	5.69E-06	0.00E+00	0.00E+00	2.25E-03	0.00E+00	2.32E-05	0.00E+00	0.00E+00	0.00E+00	2.28E-03	6.85E-02	3.33E-02	6.85E-01	3.33E-03	0.41%	0.30%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.42E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.63E-06	0.00E+00	0.00E+00	1.04E-03	0.00E+00	6.65E-07	0.00E+00	0.00E+00	0.00E+00	1.04E-03	6.80E-02	1.53E-02	6.80E-01	1.53E-03	0.19%	0.14%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.11E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	0.00E+00	7.62E-06	0.00E+00	0.00E+00	3.09E-03	0.00E+00	1.68E-06	0.00E+00	0.00E+00	0.00E+00	3.10E-03	6.80E-02	4.56E-02	6.80E-01	4.56E-03	0.57%	0.41%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	7.47E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	1.39E-05	0.00E+00	0.00E+00	5.91E-03	0.00E+00	1.57E-06	0.00E+00	0.00E+00	0.00E+00	5.92E-03	6.80E-02	8.71E-02	6.80E-01	8.71E-03	1.08%	0.77%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.50E-04	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.58E-06	0.00E+00	0.00E+00	5.52E-04	0.00E+00	2.07E-05	0.00E+00	0.00E+00	0.00E+00	5.74E-04	6.80E-02	8.44E-03	6.80E-01	8.44E-04	0.11%	0.08%
Barium	0.00E+00	mg/L	1.60E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E+00	0.00E+00	1.98E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	6.80E-02	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.26E-04	0.00E+00	0.00E+00	4.18E-02	0.00E+00	1.01E-02	0.00E+00	0.00E+00	0.00E+00	5.21E-02	4.00E+00	1.30E-02	4.00E+01	1.30E-03	0.16%	0.12%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	3.06E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	mg/L	2.14E-01	mg/kg	3.84E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.58E+01	1.24E+00	9.52E-01	9.52E-01	9.22E-01	9.22E-01	0.00E+00	0.00E+00	7.12E-04	0.00E+00	0.00E+00	4.59E-01	0.00E+00	1.69E-02	0.00E+00	0.00E+00	0.00E+00	4.77E-01	1.00E+00	4.77E-01	1.00E+01	4.77E-02	5.94%	4.24%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.88E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.48E-07	0.00E+00	0.00E+00	1.37E-04	0.00E+00	3.51E-07	0.00E+00	0.00E+00	0.00E+00	1.38E-04	4.58E+00	3.01E-05	9.16E+00	1.50E-05	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.22E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	0.00E+00	0.00E+00	2.27E-02	0.00E+00	0.00E+00	1.80E+00	0.00E+00	2.72E-01	0.00E+00	0.00E+00	0.00E+00	2.09E+00	3.28E+00	6.37E-01	1.31E+01	1.59E-01	7.94%	14.15%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.59E-07	0.00E+00	0.00E+00	1.81E-04	0.00E+00	4.63E-07	0.00E+00	0.00E+00	0.00E+00	1.82E-04	4.58E+00	3.97E-05	9.16E+00	1.99E-05	0.00%	0.00%
Copper	0.00E+00	mg/L	1.07E+01	mg/kg	7.43E+00	mg/kg	1.00E+00	5.92E+03	5.25E+00	1.32E+00	4.60E-01	5.75E-01	5.75E-01	1.49E-01	1.49E-01	0.00E+00	0.00E+00	1.38E-02	0.00E+00	0.00E+00	4.54E-01	0.00E+00	1.98E-01	0.00E+00	0.00E+00	0.00E+00	6.66E-01	1.17E+01	5.69E-02	1.51E+01	4.40E-02	0.71%	3.91%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.86E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.44E-07	0.00E+00	0.00E+00	1.31E-04	0.00E+00	1.41E-05	0.00E+00	0.00E+00	0.00E+00	1.46E-04	2.00E-02	7.29E-03	2.00E-01	7.29E-04	0.09%	0.06%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.75E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	5.11E-07	0.00E+00	0.00E+00	1.95E-04	0.00E+00	4.88E-07	0.00E+00	0.00E+00	0.00E+00	1.96E-04	9.20E-02	2.13E-03	9.20E-01	2.13E-04	0.03%	0.02%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.20E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.09E-07	0.00E+00	0.00E+00	1.59E-04	0.00E+00	1.93E-07	0.00E+00	0.00E+00	0.00E+00	1.59E-04	8.00E-02	1.99E-03	2.90E-01	5.49E-04	0.02%	0.05%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	0.00E+00	mg/L	0.00E+00	mg/kg	1.00E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	0.00E+00	0.00E+00	1.86E+01	0.00E+00	0.00E+00	3.63E+01	0.00E+00	1.86E+00	0.00E+00	0.00E+00	0.00E+00	5.67E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	3.00E-03	mg/L	0.00E+00	mg/kg	2.51E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	4.39E-01	NA	6.40E-02	6.40E-02	1.33E-02	1.33E-02	9.00E-04	0.00E+00	4.66E-02	0.00E+00	0.00E+00	5.12E-01	NA	7.46E-02	0.00E+00	0.00E+00	0.00E+00	6.34E-01	8.00E+00	7.92E-02	8.00E+01	7.92E-03	0.99%	0.71%
Manganese	0.00E+00	mg/L	4.88E+02	mg/kg	9.35E+02	mg/kg	1.00E+00	2.00E+03	2.10E+00	2.21E-01	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	0.00E+00	0.00E+00	1.73E+00	0.00E+00	0.00E+00	9.58E+00	0.00E+00	4.34E+00	0.00E+00	0.00E+00	0.00E+00	1.57E+01	8.80E+01	1.78E-01	2.84E+02	5.51E-02	2.22%	4.91%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.95E-02	mg/kg	1.00E+00		2.87E+00	7.16E+00	NA	1.35E+00	1.35E+00	1.03E-01	1.03E-01	0.00E+00	0.00E+00	1.10E-04	0.00E+00	0.00E+00	1.98E-02	NA	3.72E-03	0.00E+00	0.00E+00	0.00E+00	2.36E-02	1.32E+01	1.79E-03	3.96E+01	5.96E-04	0.02%	0.05%
Mercury (methyl)	0.00E+00	mg/L	8.01E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.17E+00	NA	NA			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	3.20E-02	0.00E+00	1.60E-01	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.41E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	6.33E-07	0.00E+00	0.00E+00	2.57E-04	0.00E+00	5.44E-07	0.00E+00	0.00E+00	0.00E+00	2.58E-04	7.00E-02	3.69E-03	7.00E-01	3.69E-04	0.05%	0.03%
Nickel	0.00E+00	mg/L	1.10E+01	mg/kg	7.10E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	5.96E-02	6.65E-02	6.65E-02	1.01E-01	1.01E-01	0.00E+00	0.00E+00	1.32E-02	0.00E+00	0.00E+00	1.56E+00	0.00E+00	2.19E-02	0.00E+00	0.00E+00	0.00E+00	1.59E+00	4.00E+01	3.98E-02	8.00E+01	1.99E-02	0.50%	1.77%
Nitrate	9.00E-02	mg/L	9.88E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	2.70E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.70E-02	5.07E+02	5.33E-05	1.13E+03	2.39E-05	0.00%	0.00%
Nitrate/Nitrite	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03								0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.07E+02	0.00E+00	1.13E+03	0.00E+00	0.00%	0.00%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.26E-07	0.00E+00	0.00E+00	1.25E-04	0.00E+00	2.15E-07	0.00E+00	0.00E+00	0.00E+00	1.25E-04	4.58E+00	2.73E-05	9.16E+00	1.37E-05	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg				1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	8.83E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.64E-06	0.00E+00	0.00E+00	6.22E-04	0.00E+00	1.37E-06	0.00E+00	0.00E+00	0.00E+00	6.25E-04	2.40E-01	2.60E-03	2.40E+00	2.60E-04	0.03%	0.02%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	4.23E-01	mg/kg				1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.91E-01	0.00E+00	1.38E-03	0.00E+00	0.00E+00	0.00E+00	2.92E-01	2.40E-01	1.22E+00	2.40E+00	1.22E-01	15.18%	10.84%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.80E-01	mg/kg	1.00E+00			1.14E+00	NA	1.88E+01	1.88E+01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	5.19E-04	0.00E+00	0.00E+00	1.48E-02	NA	2.44E-01	0.00E+00	0.00E+00	0.00E+00	2.59E-01	8.50E+00	3.05E-02	2.55E+01	1.02E-02	0.38%	0.90%
Selenium	0.00E+00	mg/L	8.74E-01	mg/kg	4.13E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.18E+00	1.06E+00	4.64E-01	4.64E-01	1.95E-01	1.95E-01	0.00E+00	0.00E+00	7.65E-04	0.00E+00	0.00E+00	2.25E-02	0.00E+00	8.87E-03	0.00E+00	0.00E+00	0.00E+00	3.22E-02	2.00E-01	1.61E-01	3.30E-01	9.75E-02	2.00%	8.67%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	2.65E-02	0.00E+00	0.00E+00	1.84E-01	0.00E+00	2.32E-01	0.00E+00	0.00E+00	0.00E+00	4.42E-01	2.63E+02	1.68E-03	7.89E+02	5.60E-04	0.02%	0.05%
Sulfate	5.00E+00	mg/L	3.00E+01	mg/kg	2.30E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	1.50E+00	0.00E+00	4.27E-01	0.00E+00	0.00E+00	1.22E+01	0.00E+00	3.73E+00	0.00E+00	0.00E+00	0.00E+00	1.78E+01	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.40E-03	0.00E+00	7.40E-02	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.04E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	5.63E-07	0.00E+00	0.00E+00	2.22E-04	0.00E+00	5.67E-07	0.00E+00	0.00E+00	0.00E+00	2.23E-04	4.58E+00	4.87E-05	9.16E+00	2.43E-05	0.00%	0.00%
Vanadium	0.00E+00	mg/L	3.08E+01	mg/kg	1.53E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	0.00E+00	0.00E+00	2.84E-02	0.00E+00	0.00E+00	6.26E-02	0.00E+00	2.84E-03	0.00E+00	0.00E+00	0.00E+00	9.39E-02	2.10E-01	4.47E-01	2.10E+00	4.47E-02	5.57%	3.98%
Zinc	0.00E+00	mg/L	5.15E+01	mg/kg	5.89E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.53E+00	8.57E-01	8.08E-01	8.08E-01	4.51E-01	4.51E-01	0.00E+00	0.00E+00	1.09E-01	0.00E+00	0.00E+00	1.51E+01	0.00E+00	2.21E+00	0.00E+00	0.00E+00	0.00E+00	1.74E+01	1.60E+02	1.09E-01	3.20E+02	5.44E-02	1.35%	4.84%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.0%	0.0%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	2.1E-04	1.0E-04	0.00%	0.01%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	7.4E-03	1.5E-03	0.1%	0.1%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.9E-01	1.9E-02	2.4%	1.7%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.0%	0.0%
Aldrin/Dieldrin/Endrin EEQ:	1.0E-02	1.1E-03	0.1%	0.1%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi \, x \, Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text tables.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Unit
Terrestrial plant diet fraction =	0.5	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0.5	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	4.08E-05	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.00204	kg/d
Body weight =	0.022	kg
Home range =	0.034595	acres
Water intake rate =	0.0066	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-132
Tier 2 COPCs
EEQs and Hazard Indices for the Deer Mouse at LHAAP
Low Impact Sub-Area/Saunders Branch Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
							-----Unitless-----								
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg				7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01
2,3,7,8-TCDD TEQ	0.00E+00	mg/L	6.98E-06	mg/kg	3.18E-06	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	8.00E-04	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	3.10E-03	mg/kg	1.00E+00		4.75E+00	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.07E-03	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.15E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Aluminum	0.00E+00	mg/L	1.18E+04	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-01	mg/kg				3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.55E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.21E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	3.32E-03	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	4.07E-03	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	7.92E-04	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01
Barium	0.00E+00	mg/L	1.24E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	5.10E-02	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.27E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01
Cadmium	0.00E+00	mg/L	1.62E-01	mg/kg	3.02E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	2.87E+01	1.40E+00	1.06E+00	1.06E+00	6.72E-01	6.72E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Copper	0.00E+00	mg/L	8.76E+00	mg/kg	6.53E+00	mg/kg	1.00E+00	1.11E+03	1.56E+00	1.45E+00	5.20E-01	6.22E-01	6.22E-01	8.97E-02	8.97E-02
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.72E-04	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.93E-04	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01
Iron	0.00E+00	mg/L	0.00E+00	mg/kg	9.10E+03	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E+01	1.39E+01	1.39E+01		
Lead	2.00E-03	mg/L	0.00E+00	mg/kg	2.21E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	4.50E-01	NA	6.78E-02	6.78E-02	1.16E-02	1.16E-02
Manganese	0.00E+00	mg/L	3.46E+02	mg/kg	8.30E+02	mg/kg	1.00E+00	2.50E+02	4.20E-01	2.26E-01	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-02	mg/kg	1.00E+00		1.14E+00	7.64E+00	NA	1.41E+00	1.41E+00	9.15E-02	9.15E-02
Mercury (methyl)	0.00E+00	mg/L	5.78E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	1.37E+00	NA	NA		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.88E-04	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01
Nickel	0.00E+00	mg/L	8.62E+00	mg/kg	6.36E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	6.34E-02	6.84E-02	6.84E-02	8.71E-02	8.71E-02
Nitrate	3.25E-02	mg/L	5.95E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Nitrate/Nitrite	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E-04	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg				8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.62E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-01	mg/kg				8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	7.70E-02	mg/kg	1.00E+00			3.00E-01	NA	3.19E+01	3.19E+01	1.11E-01	1.11E-01
Selenium	0.00E+00	mg/L	6.32E-01	mg/kg	3.74E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.21E+00	8.19E-01	4.59E-01	4.59E-01	1.51E-01	1.51E-01
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.30E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Sulfate	2.88E+00	mg/L	2.58E+01	mg/kg	1.30E+02	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Thallium	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Vanadium	0.00E+00	mg/L	2.60E+01	mg/kg	1.45E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03
Zinc	0.00E+00	mg/L	4.30E+01	mg/kg	4.79E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	6.34E+00	9.28E-01	8.84E-01	8.84E-01	1.84E-01	1.84E-01

Chemical	EED Surface Water (mg/kg-d)	EED Sediment (mg/kg-d)	EED Soil (mg/kg-d)	EED Fish (mg/kg-d)	EED Aq. Invert. (mg/kg-d)	EED Terr. Invert. (mg/kg-d)	EED Aq. Plants (mg/kg-d)	EED Terr. Plants (mg/kg-d)	EED Plant Roots (mg/kg-d)	EED Mammals (mg/kg-d)	EED Birds (mg/kg-d)	Total EED (mg/kg-d)	NOAEL (mg/kg-d)	EEQ N	LOAEL (mg/kg-d)	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	0.00E+00	0.00E+00	5.90E-09	0.00E+00	0.00E+00	1.62E-06	0.00E+00	5.72E-10	0.00E+00	0.00E+00	0.00E+00	1.63E-06	1.00E-06	1.63E+00	1.00E-05	1.63E-01	46.56%	29.61%
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	0.00E+00	1.48E-06	0.00E+00	0.00E+00	3.32E-04	0.00E+00	1.04E-06	0.00E+00	0.00E+00	0.00E+00	3.35E-04	8.00E-01	4.18E-04	4.00E+00	8.37E-05	0.01%	0.02%
4,4'-DDE	0.00E+00	0.00E+00	5.75E-06	0.00E+00	0.00E+00	1.29E-03	0.00E+00	1.95E-05	0.00E+00	0.00E+00	0.00E+00	1.32E-03	8.00E-01	1.65E-03	4.00E+00	3.30E-04	0.05%	0.06%
4,4'-DDT	0.00E+00	0.00E+00	1.98E-06	0.00E+00	0.00E+00	4.59E-04	0.00E+00	1.39E-06	0.00E+00	0.00E+00	0.00E+00	4.63E-04	8.00E-01	5.79E-04	4.00E+00	1.16E-04	0.02%	0.02%
Aldrin	0.00E+00	0.00E+00	3.27E-07	0.00E+00	0.00E+00	7.56E-05	0.00E+00	3.97E-08	0.00E+00	0.00E+00	0.00E+00	7.60E-05	2.00E-01	3.80E-04	1.00E+00	7.60E-05	0.01%	0.01%
alpha-Chlordane	0.00E+00	0.00E+00	5.84E-07	0.00E+00	0.00E+00	1.33E-04	0.00E+00	1.36E-07	0.00E+00	0.00E+00	0.00E+00	1.34E-04	4.58E+00	2.92E-05	9.16E+00	1.46E-05	0.00%	0.00%
Aluminum	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.93E+00	0.00E+00	1.93E+01	0.00E+00	0.00%	0.00%
Antimony	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.08E-03	0.00E+00	8.74E-04	0.00E+00	0.00E+00	0.00E+00	7.96E-03	1.25E-01	6.37E-02	1.25E+00	6.37E-03	1.82%	1.16%
Aroclor 1242	0.00E+00	0.00E+00	4.73E-06	0.00E+00	0.00E+00	1.08E-03	0.00E+00	9.92E-07	0.00E+00	0.00E+00	0.00E+00	1.08E-03	6.85E-02	1.58E-02	6.85E-01	1.58E-03	0.45%	0.29%
Aroclor 1248	0.00E+00	0.00E+00	2.24E-06	0.00E+00	0.00E+00	5.11E-04	0.00E+00	4.70E-07	0.00E+00	0.00E+00	0.00E+00	5.13E-04	6.80E-02	7.55E-03	6.80E-01	7.55E-04	0.22%	0.14%
Aroclor 1254	0.00E+00	0.00E+00	6.15E-06	0.00E+00	0.00E+00	1.44E-03	0.00E+00	5.50E-07	0.00E+00	0.00E+00	0.00E+00	1.44E-03	6.80E-02	2.12E-02	6.80E-01	2.12E-03	0.61%	0.39%
Aroclor 1260	0.00E+00	0.00E+00	7.55E-06	0.00E+00	0.00E+00	1.86E-03	0.00E+00	1.21E-07	0.00E+00	0.00E+00	0.00E+00	1.86E-03	6.80E-02	2.74E-02	6.80E-01	2.74E-03	0.78%	0.50%
Aroclor 1268	0.00E+00	0.00E+00	1.47E-06	0.00E+00	0.00E+00	2.97E-04	0.00E+00	1.93E-05	0.00E+00	0.00E+00	0.00E+00	3.17E-04	6.80E-02	4.67E-03	6.80E-01	4.67E-04	0.13%	0.08%
Barium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E+00	0.00E+00	1.98E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	0.00E+00	9.46E-05	0.00E+00	0.00E+00	1.81E-02	0.00E+00	7.60E-03	0.00E+00	0.00E+00	0.00E+00	2.58E-02	4.00E+00	6.45E-03	4.00E+01	6.45E-04	0.18%	0.12%
bis(2-ethylhexyl)phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	0.00E+00	5.61E-04	0.00E+00	0.00E+00	4.03E-01	0.00E+00	1.49E-02	0.00E+00	0.00E+00	0.00E+00	4.18E-01	1.00E+00	4.18E-01	1.00E+01	4.18E-02	11.94%	7.59%
Chlordane	0.00E+00	0.00E+00	3.21E-07	0.00E+00	0.00E+00	7.29E-05	0.00E+00	7.48E-08	0.00E+00	0.00E+00	0.00E+00	7.33E-05	4.58E+00	1.60E-05	9.16E+00	8.00E-06	0.00%	0.00%
Chromium	0.00E+00	0.00E+00	2.04E-02	0.00E+00	0.00E+00	1.56E-01	0.00E+00	2.10E-02	0.00E+00	0.00E+00	0.00E+00	1.98E-01	3.28E+00	6.03E-02	1.31E+01	1.51E-02	1.72%	2.73%
cis-Nonachlor	0.00E+00	0.00E+00	3.93E-07	0.00E+00	0.00E+00	8.93E-05	0.00E+00	9.17E-08	0.00E+00	0.00E+00	0.00E+00	8.98E-05	4.58E+00	1.96E-05	9.16E+00	9.81E-06	0.00%	0.00%
Copper	0.00E+00	0.00E+00	1.21E-02	0.00E+00	0.00E+00	4.40E-01	0.00E+00	1.88E-01	0.00E+00	0.00E+00	0.00E+00	6.40E-01	1.17E+01	5.47E-02	1.51E+01	4.23E-02	1.56%	7.68%
Dieldrin	0.00E+00	0.00E+00	3.19E-07	0.00E+00	0.00E+00	7.02E-05	0.00E+00	1.91E-07	0.00E+00	0.00E+00	0.00E+00	7.07E-05	2.00E-02	3.53E-03	2.00E-01	3.53E-04	0.10%	0.06%
Endrin	0.00E+00	0.00E+00	4.41E-07	0.00E+00	0.00E+00	9.71E-05	0.00E+00	3.02E-07	0.00E+00	0.00E+00	0.00E+00	9.78E-05	9.20E-02	1.06E-03	9.20E-01	1.06E-04	0.03%	0.02%
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	0.00E+00	3.58E-07	0.00E+00	0.00E+00	8.01E-05	0.00E+00	1.42E-07	0.00E+00	0.00E+00	0.00E+00	8.06E-05	8.00E-02	1.01E-03	2.90E-01	2.78E-04	0.03%	0.05%
HMX	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	0.00E+00	0.00E+00	1.69E+01	0.00E+00	0.00E+00	1.52E+01	0.00E+00	1.69E+00	0.00E+00	0.00E+00	0.00E+00	3.38E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	6.00E-04	0.00E+00	4.09E-02	0.00E+00	0.00E+00	4.61E-01	NA	6.94E-02	0.00E+00	0.00E+00	0.00E+00	5.72E-01	8.00E+00	7.15E-02	8.00E+01	7.15E-03	2.04%	1.30%
Manganese	0.00E+00	0.00E+00	1.54E+00	0.00E+00	0.00E+00	8.70E+00	0.00E+00	3.04E+00	0.00E+00	0.00E+00	0.00E+00	1.33E+01	8.80E+01	1.51E-01	2.84E+02	4.67E-02	4.30%	8.48%
Mercury (inorganic)	0.00E+00	0.00E+00	1.00E-04	0.00E+00	0.00E+00	1.91E-02	NA	3.53E-03	0.00E+00	0.00E+00	0.00E+00	2.28E-02	1.32E+01	1.72E-03	3.96E+01	5.75E-04	0.05%	0.10%
Mercury (methyl)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	3.20E-02	0.00E+00	1.60E-01	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	0.00E+00	5.35E-07	0.00E+00	0.00E+00	1.25E-04	0.00E+00	4.60E-08	0.00E+00	0.00E+00	0.00E+00	1.26E-04	7.00E-02	1.80E-03	7.00E-01	1.80E-04	0.05%	0.03%
Nickel	0.00E+00	0.00E+00	1.18E-02	0.00E+00	0.00E+00	3.12E-01	0.00E+00	2.02E-02	0.00E+00	0.00E+00	0.00E+00	3.44E-01	4.00E+01	8.60E-03	8.00E+01	4.30E-03	0.25%	0.78%
Nitrate	9.75E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.75E-03	5.07E+02	1.92E-05	1.13E+03	8.63E-06	0.00%	0.00%
Nitrate/Nitrite	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.07E+02	0.00E+00	1.13E+03	0.00E+00	0.00%	0.00%
Oxychlordane	0.00E+00	0.00E+00	3.16E-07	0.00E+00	0.00E+00	6.97E-05	0.00E+00	2.08E-07	0.00E+00	0.00E+00	0.00E+00	7.02E-05	4.58E+00	1.53E-05	9.16E+00	7.67E-06	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	0.00E+00	1.04E-06	0.00E+00	0.00E+00	2.28E-04	0.00E+00	7.14E-07	0.00E+00	0.00E+00	0.00E+00	2.30E-04	2.40E-01	9.57E-04	2.40E+00	9.57E-05	0.03%	0.02%
Pentachlorophenol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.83E-02	0.00E+00	4.88E-04	0.00E+00	0.00E+00	0.00E+00	9.88E-02	2.40E-01	4.12E-01	2.40E+00	4.12E-02	11.74%	7.47%
Perchlorate	0.00E+00	0.00E+00	1.43E-04	0.00E+00	0.00E+00	1.07E-03	NA	1.14E-01	0.00E+00	0.00E+00	0.00E+00	1.15E-01	8.50E+00	1.36E-02	2.55E+01	4.52E-03	0.39%	0.82%
Selenium	0.00E+00	0.00E+00	6.93E-04	0.00E+00	0.00E+00	2.10E-02	0.00E+00	7.95E-03	0.00E+00	0.00E+00	0.00E+00	2.96E-02	2.00E-01	1.48E-01	3.30E-01	8.97E-02	4.22%	16.28%
Silver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	0.00E+00	2.41E-02	0.00E+00	0.00E+00	5.24E-02	0.00E+00	1.26E-01	0.00E+00	0.00E+00	0.00E+00	2.03E-01	2.63E+02	7.72E-04	7.89E+02	2.57E-04	0.02%	0.05%
Sulfate	8.63E-01	0.00E+00	2.41E-01	0.00E+00	0.00E+00	1.81E+00	0.00E+00	1.27E+00	0.00E+00	0.00E+00	0.00E+00	4.18E+00	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.40E-03	0.00E+00	7.40E-02	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	0.00E+00	4.69E-07	0.00E+00	0.00E+00	1.06E-04	0.00E+00	1.09E-07	0.00E+00	0.00E+00	0.00E+00	1.07E-04	4.58E+00	2.34E-05	9.16E+00	1.17E-05	0.00%	0.00%
Vanadium	0.00E+00	0.00E+00	2.68E-02	0.00E+00	0.00E+00	2.82E-02	0.00E+00	2.42E-03	0.00E+00	0.00E+00	0.00E+00	5.74E-02	2.10E-01	2.73E-01	2.10E+00	2.73E-02	7.80%	4.96%
Zinc	0.00E+00	0.00E+00	8.89E-02	0.00E+00	0.00E+00	1.41E+01	0.00E+00	1.97E+00	0.00E+00	0.00E+00	0.00E+00	1.62E+01	1.60E+02	1.01E-01	3.20E+02	5.05E-02	2.88%	9.16%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.0%	0.0%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.0E-04	5.2E-05	0.00%	0.01%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	2.6E-03	5.3E-04	0.1%	0.1%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	7.7E-02	7.7E-03	2.2%	1.4%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.0%	0.0%
Aldrin/Dieldrin/Endrin EEQ:	5.0E-03	5.4E-04	0.1%	0.1%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi \, x Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0.5	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0.5	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	4.08E-05	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.00204	kg/d
Body weight =	0.022	kg
Home range =	0.145792	acres
Water intake rate =	0.0066	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-133
Tier 1 COPCs
EEQs and Hazard Indices for the Raccoon at LHAAP
Low Impact Sub-Area/Saunders Branch Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							---Unitless---									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	EEQ N	mg/kg-d	EEQ L	EEQ N	EEQ L
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg				1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	0.00E+00	mg/L	6.98E-06	mg/kg	3.95E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	0.00E+00	1.65E-08	9.31E-09	0.00E+00	1.15E-06	6.60E-07	0.00E+00	5.40E-10	0.00E+00	6.03E-10	0.00E+00	1.84E-06	1.00E-06	1.84E+00	1.00E-05	1.84E-01	0.59%	0.58%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.40E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.30E-06	0.00E+00	0.00E+00	1.64E-04	0.00E+00	3.37E-06	0.00E+00	4.05E-06	0.00E+00	1.74E-04	8.00E-01	2.18E-04	4.00E+00	4.36E-05	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	4.30E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	1.01E-05	0.00E+00	0.00E+00	5.05E-04	0.00E+00	8.03E-05	0.00E+00	1.07E-05	0.00E+00	6.06E-04	8.00E-01	7.58E-04	4.00E+00	1.52E-04	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.23E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	0.00E+00	5.26E-06	0.00E+00	0.00E+00	2.70E-04	0.00E+00	5.37E-06	0.00E+00	9.30E-06	0.00E+00	2.90E-04	8.00E-01	3.62E-04	4.00E+00	7.25E-05	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.87E-04	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.41E-07	0.00E+00	0.00E+00	2.26E-05	0.00E+00	3.82E-08	0.00E+00	5.41E-07	0.00E+00	2.36E-05	2.00E-01	1.18E-04	1.00E+00	2.36E-05	0.00%	0.00%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.76E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	8.87E-07	0.00E+00	0.00E+00	4.46E-05	0.00E+00	4.57E-07	0.00E+00	1.09E-06	0.00E+00	4.71E-05	4.58E+00	1.03E-05	9.16E+00	5.14E-06	0.00%	0.00%
Aluminum	0.00E+00	mg/L	1.63E+04	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	0.00E+00	3.84E+01	0.00E+00	0.00E+00	5.52E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.90E+02	1.93E+00	3.06E+02	1.93E+01	3.06E+01	97.73%	96.26%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	6.37E-01	mg/kg				1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.46E-03	0.00E+00	1.34E-03	0.00E+00	2.66E-04	0.00E+00	7.07E-03	1.25E-01	5.66E-02	1.25E+00	5.66E-03	0.02%	0.02%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.07E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	7.24E-06	0.00E+00	0.00E+00	3.65E-04	0.00E+00	1.51E-05	0.00E+00	8.87E-06	0.00E+00	3.96E-04	6.85E-02	5.79E-03	6.85E-01	5.79E-04	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.42E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.35E-06	0.00E+00	0.00E+00	1.69E-04	0.00E+00	4.32E-07	0.00E+00	4.10E-06	0.00E+00	1.77E-04	6.80E-02	2.60E-03	6.90E-01	2.56E-04	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.11E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	0.00E+00	9.69E-06	0.00E+00	0.00E+00	5.01E-04	0.00E+00	1.09E-06	0.00E+00	1.09E-05	0.00E+00	5.23E-04	6.80E-02	7.69E-03	6.90E-01	7.58E-04	0.00%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	7.47E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	1.76E-05	0.00E+00	0.00E+00	9.59E-04	0.00E+00	1.02E-06	0.00E+00	3.60E-05	0.00E+00	1.01E-03	6.80E-02	1.49E-02	6.90E-01	1.47E-03	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.50E-04	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.01E-06	0.00E+00	0.00E+00	8.96E-05	0.00E+00	1.35E-05	0.00E+00	2.46E-06	0.00E+00	1.08E-04	6.80E-02	1.58E-03	6.90E-01	1.56E-04	0.00%	0.00%
Barium	0.00E+00	mg/L	1.60E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	3.78E-01	0.00E+00	0.00E+00	5.43E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.80E+00	5.10E+00	1.14E+00	1.98E+01	2.93E-01	0.36%	0.92%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	6.80E-02	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.60E-04	0.00E+00	0.00E+00	6.79E-03	0.00E+00	6.58E-03	0.00E+00	1.97E-04	0.00E+00	1.37E-02	4.00E+00	3.43E-03	4.00E+01	3.43E-04	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	3.06E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	0.00E+00	7.22E-04	0.00E+00	0.00E+00	5.04E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.11E-02	1.83E+01	2.79E-03	1.83E+02	2.79E-04	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	mg/L	2.14E-01	mg/kg	3.84E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.58E+01	1.24E+00	9.52E-01	9.52E-01	9.22E-01	9.22E-01	0.00E+00	5.05E-04	9.05E-04	0.00E+00	1.29E-02	7.46E-02	0.00E+00	1.10E-02	0.00E+00	8.88E-04	0.00E+00	1.01E-01	1.00E+00	1.01E-01	1.00E+01	1.01E-02	0.03%	0.03%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.88E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.42E-07	0.00E+00	0.00E+00	2.22E-05	0.00E+00	2.28E-07	0.00E+00	5.42E-07	0.00E+00	2.35E-05	4.58E+00	5.12E-06	9.16E+00	2.56E-06	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.22E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	0.00E+00	0.00E+00	2.89E-02	0.00E+00	0.00E+00	2.91E-01	0.00E+00	1.77E-01	0.00E+00	1.02E-02	0.00E+00	5.07E-01	3.28E+00	1.55E-01	1.31E+01	3.86E-02	0.05%	0.12%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	5.84E-07	0.00E+00	0.00E+00	2.94E-05	0.00E+00	3.01E-07	0.00E+00	7.16E-07	0.00E+00	3.10E-05	4.58E+00	6.76E-06	9.16E+00	3.38E-06	0.00%	0.00%
Copper	0.00E+00	mg/L	1.07E+01	mg/kg	7.43E+00	mg/kg	1.00E+00	5.92E+03	5.25E+00	1.32E+00	4.60E-01	5.75E-01	5.75E-01	1.49E-01	1.49E-01	0.00E+00	2.53E-02	1.75E-02	0.00E+00	4.23E-01	7.37E-02	0.00E+00	1.29E-01	0.00E+00	2.79E-03	0.00E+00	6.71E-01	1.17E+01	5.74E-02	1.51E+01	4.43E-02	0.02%	0.14%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.86E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.38E-07	0.00E+00	0.00E+00	2.13E-05	0.00E+00	9.16E-06	0.00E+00	5.37E-07	0.00E+00	3.15E-05	2.00E-02	1.57E-03	2.00E-01	1.57E-04	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.75E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	6.49E-07	0.00E+00	0.00E+00	3.16E-05	0.00E+00	3.17E-07	0.00E+00	8.40E-07	0.00E+00	3.34E-05	9.20E-02	3.64E-04	9.20E-01	3.64E-05	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.20E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	5.20E-07	0.00E+00	0.00E+00	2.57E-05	0.00E+00	1.25E-07	0.00E+00	6.37E-07	0.00E+00	2.70E-05	8.00E-02	3.38E-04	2.90E-01	9.32E-05	0.00%	0.00%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	0.00E+00	mg/L	0.00E+00	mg/kg	1.00E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	0.00E+00	0.00E+00	2.37E+01	0.00E+00	0.00E+00	5.89E+00	0.00E+00	1.21E+00	0.00E+00	5.21E-02	0.00E+00	3.08E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	3.00E-03	mg/L	0.00E+00	mg/kg	2.51E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	4.39E-01	NA	6.40E-02	6.40E-02	1.33E-02	1.33E-02	2.47E-04	0.00E+00	5.93E-02	1.13E-02	0.00E+00	8.31E-02	NA	4.84E-02	0.00E+00	8.39E-04	0.00E+00	2.03E-01	8.00E+00	2.54E-02	8.00E+01	2.54E-03	0.01%	0.01%
Manganese	0.00E+00	mg/L	4.88E+02	mg/kg	9.35E+02	mg/kg	1.00E+00	2.00E+03	2.10E+00	2.21E-01	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	0.00E+00	1.15E+00	2.21E+00	0.00E+00	7.71E+00	1.56E+00	0.00E+00	2.82E+00	0.00E+00	2.25E-02	0.00E+00	1.55E+01	8.80E+01	1.76E-01	2.84E+02	5.44E-02	0.06%	0.17%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.95E-02	mg/kg	1.00E+00		2.87E+00	7.16E+00	NA	1.35E+00	1.35E+00	1.03E-01	1.03E-01	0.00E+00	0.00E+00	1.40E-04	0.00E+00	0.00E+00	3.21E-03	NA	2.41E-03	0.00E+00	1.54E-05	0.00E+00	5.78E-03	1.00E+00	5.78E-03	3.00E+00	1.93E-03	0.00%	0.01%
Mercury (methyl)	0.00E+00	mg/L	8.01E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.17E+00	NA	NA			0.00E+00	1.89E-04	0.00E+00	0.00E+00	1.73E-03	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	1.92E-03	1.50E-02	1.28E-01	2.50E-02	7.67E-02	0.04%	0.24%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.41E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	8.05E-07	0.00E+00	0.00E+00	4.17E-05	0.00E+00	3.53E-07	0.00E+00	9.87E-07	0.00E+00	4.38E-05	7.00E-02	6.26E-04	7.00E-01	6.26E-05	0.00%	0.00%
Nickel	0.00E+00	mg/L	1.10E+01	mg/kg	7.10E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	5.96E-02	6.65E-02	6.65E-02	1.01E-01	1.01E-01	0.00E+00	2.60E-02	1.68E-02	0.00E+00	1.93E-01	2.53E-01	0.00E+00	1.42E-02	0.00E+00	1.80E-03	0.00E+00	5.05E-01	4.00E+01	1.26E-02	8.00E+01	6.31E-03	0.00%	0.02%
Nitrate	9.00E-02	mg/L	9.88E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	7.41E-03	2.33E-03	0.00E+00	2.41E-01	1.56E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.66E-01	5.07E+02	5.26E-04	1.13E+03	2.36E-04	0.00%	0.00%
Nitrate/Nitrite	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03								0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.07E+02	0.00E+00	1.13E+03	0.00E+00	0.00%	0.00%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.15E-07	0.00E+00	0.00E+00	2.02E-05	0.00E+00	1.39E-07	0.00E+00	5.08E-07	0.00E+00	2.13E-05	4.58E+00	4.65E-06	9.16E+00	2.32E-06	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg				1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	8.83E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.08E-06	0.00E+00	0.00E+00	1.01E-04	0.00E+00	8.90E-07	0.00E+00	2.55E-06	0.00E+00	1.06E-04	2.40E-01	4.43E-04	2.40E+00	4.43E-05	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	4.23E-01	mg/kg				1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.72E-02	0.00E+00	8.97E-04	0.00E+00	1.22E-03	0.00E+00	4.94E-02	2.40E-01	2.06E-01	2.40E+00	2.06E-02	0.07%	0.06%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.80E-01	mg/kg	1.00E+00			1.14E+00	NA	1.88E+01	1.88E+01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	6.60E-04	0.00E+00	0.00E+00	2.40E-03	NA	1.58E-01	0.00E+00	1.17E-04	0.00E+00	1.62E-01	8.50E+00	1.90E-02	2.55E+01	6.33E-03	0.01%	0.02%
Selenium	0.00E+00	mg/L	8.74E-01	mg/kg	4.13E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.18E+00	1.06E+00	4.64E-01	4.64E-01	1.95E-01	1.95E-01	0.00E+00	2.06E-03	9.73E-04	0.00E+00	2.96E-02	3.66E-03	0.00E+00	5.76E-03	0.00E+00	2.02E-04	0.00E+00	4.23E-02	2.00E-01	2.11E-01	3.30E-01	1.28E-01	0.07%	0.40%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	3.37E-02	0.00E+00	0.00E+00	2.99E-02	0.00E+00	1.50E-01	0.00E+00	5.95E-03	0.00E+00	2.20E-01	2.63E+02	8.36E-04	7.89E+02	2.79E-04	0.00%	0.00%
Sulfate	5.00E+00	mg/L	3.00E+01	mg/kg	2.30E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	4.12E-01	7.07E-02	5.42E-01	1.34E+01	4.74E-01	1.97E+00	0.00E+00	2.42E+00	0.00E+00	9.59E-02	0.00E+00	1.94E+01	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.40E-03	0.00E+00	7.40E-02	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.04E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	7.16E-07	0.00E+00	0.00E+00	3.60E-05	0.00E+00	3.68E-07	0.00E+00	8.77E-07	0.00E+00	3.80E-05	4.58E+00	8.29E-06	9.16E+00	4.14E-06	0.00%	0.00%
Vanadium	0.00E+00	mg/L	3.08E+01	mg/kg	1.53E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	0.00E+00	7.26E-02	3.62E-02	0.00E+00	4.87E-01	1.02E-02	0.00E+00	1.85E-03	0.00E+00	2.28E-04	0.00E+00	6.08E-01	2.10E-01	2.89E+00	2.10E+00	2.89E-01	0.92%	0.91%
Zinc	0.00E+00	mg/L	5.15E+01	mg/kg	5.89E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.53E+00	8.57E-01	8.08E-01	8.08E-01	4.51E-01	4.51E-01	0.00E+00	1.21E-01	1.39E-01	0.00E+00	2.91E+00	2.45E+00	0.00E+00	1.43E+00	0.00E+00	6.66E-02	0.00E+00	7.12E+00	1.60E+02	4.45E-02	3.20E+02	2.23E-02	0.01%	0.07%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.0%	0.0%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	3.5E-05	1.8E-05	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	1.3E-03	2.7E-04	0.0%	0.0%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	3.3E-02	3.2E-03	0.0%	0.0%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	2.8E-03	2.8E-04	0.0%	0.0%
Aldrin/Dieldrin/Endrin EEQ:	2.1E-03	2.2E-04	0.0%	0.0%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi \times Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text tables.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0.6	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.05	unitless
Aq. Invert diet fraction =	0.15	unitless
Terr. Invert diet fraction =	0.15	unitless
Mammal diet fraction =	0.05	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.01363	kg/d
Sediment ingestion rate =	0.01363	kg/d
Food ingestion rate =	0.29	kg/d
Body weight =	5.78	kg
Home range =	13.09653	acres
Water intake rate =	0.476	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-134
Tier 2 COPCs
EEQs and Hazard Indices for the Raccoon at LHAAP
Low Impact Sub-Area/Saunders Branch Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							-----	-----	-----	-----	-----Unitless-----	-----	-----	-----	-----	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg				7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	0.00E+00	mg/L	6.98E-06	mg/kg	3.18E-06	mg/kg	#######	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	0.00E+00	1.65E-08	7.51E-09	0.00E+00	2.45E-07	2.64E-07	0.00E+00	3.71E-10	0.00E+00	3.77E-10	0.00E+00	5.34E-07	1.00E-06	5.34E-01	1.00E-05	5.34E-02	0.24%	0.23%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	8.00E-04	mg/kg	#######		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.89E-06	0.00E+00	0.00E+00	5.39E-05	0.00E+00	6.75E-07	0.00E+00	1.76E-06	0.00E+00	5.82E-05	8.00E-01	7.28E-05	4.00E+00	1.46E-05	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	3.10E-03	mg/kg	#######		4.75E+00	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	7.31E-06	0.00E+00	0.00E+00	2.10E-04	0.00E+00	1.27E-05	0.00E+00	7.33E-06	0.00E+00	2.37E-04	8.00E-01	2.97E-04	4.00E+00	5.93E-05	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.07E-03	mg/kg	#######		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	2.52E-06	0.00E+00	0.00E+00	7.46E-05	0.00E+00	9.00E-07	0.00E+00	2.38E-06	0.00E+00	8.04E-05	8.00E-01	1.00E-04	4.00E+00	2.01E-05	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	#######			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.15E-07	0.00E+00	0.00E+00	1.23E-05	0.00E+00	2.58E-08	0.00E+00	3.87E-07	0.00E+00	1.31E-05	2.00E-01	6.55E-05	1.00E+00	1.31E-05	0.00%	0.00%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.15E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	7.43E-07	0.00E+00	0.00E+00	2.16E-05	0.00E+00	8.85E-08	0.00E+00	6.93E-07	0.00E+00	2.31E-05	4.58E+00	5.04E-06	9.16E+00	2.52E-06	0.00%	0.00%
Aluminum	0.00E+00	mg/L	1.18E+04	mg/kg	0.00E+00	mg/kg	#######	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	0.00E+00	2.79E+01	0.00E+00	0.00E+00	4.00E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.28E+02	1.93E+00	2.22E+02	1.93E+01	2.22E+01	98.72%	97.43%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-01	mg/kg				3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E-03	0.00E+00	5.67E-04	0.00E+00	1.42E-04	0.00E+00	1.86E-03	1.25E-01	1.49E-02	1.25E+00	1.49E-03	0.01%	0.01%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.55E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	6.02E-06	0.00E+00	0.00E+00	1.75E-04	0.00E+00	6.44E-07	0.00E+00	5.61E-06	0.00E+00	1.87E-04	6.85E-02	2.73E-03	6.85E-01	2.73E-04	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.21E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.85E-06	0.00E+00	0.00E+00	8.29E-05	0.00E+00	3.05E-07	0.00E+00	2.66E-06	0.00E+00	8.87E-05	6.80E-02	1.30E-03	6.90E-01	1.29E-04	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	3.32E-03	mg/kg	#######		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	7.82E-06	0.00E+00	0.00E+00	2.33E-04	0.00E+00	3.57E-07	0.00E+00	4.14E-06	0.00E+00	2.46E-04	6.80E-02	3.61E-03	6.90E-01	3.56E-04	0.00%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	4.07E-03	mg/kg	#######			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	9.60E-06	0.00E+00	0.00E+00	3.01E-04	0.00E+00	7.88E-08	0.00E+00	1.71E-05	0.00E+00	3.28E-04	6.80E-02	4.82E-03	6.90E-01	4.75E-04	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	7.92E-04	mg/kg	#######			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.87E-06	0.00E+00	0.00E+00	4.81E-05	0.00E+00	1.26E-05	0.00E+00	1.74E-06	0.00E+00	6.43E-05	6.80E-02	9.46E-04	6.90E-01	9.32E-05	0.00%	0.00%
Barium	0.00E+00	mg/L	1.24E+02	mg/kg	0.00E+00	mg/kg	#######	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	2.92E-01	0.00E+00	0.00E+00	4.20E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.49E+00	5.10E+00	8.80E-01	1.98E+01	2.27E-01	0.39%	1.00%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	5.10E-02	mg/kg	#######			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.20E-04	0.00E+00	0.00E+00	2.94E-03	0.00E+00	4.94E-03	0.00E+00	1.12E-04	0.00E+00	8.10E-03	4.00E+00	2.03E-03	4.00E+01	2.03E-04	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.27E-01	mg/kg	0.00E+00	mg/kg	#######	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	0.00E+00	5.35E-04	0.00E+00	0.00E+00	7.97E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.51E-03	1.83E+01	4.64E-04	1.83E+02	4.65E-05	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	mg/L	1.62E-01	mg/kg	3.02E-01	mg/kg	#######	1.15E+03	6.00E-01	2.87E+01	1.40E+00	1.06E+00	1.06E+00	6.72E-01	6.72E-01	0.00E+00	3.82E-04	7.13E-04	0.00E+00	7.32E-04	6.54E-02	0.00E+00	9.65E-03	0.00E+00	5.10E-04	0.00E+00	7.74E-02	1.00E+00	7.74E-02	1.00E+01	7.74E-03	0.03%	0.03%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.08E-07	0.00E+00	0.00E+00	1.18E-05	0.00E+00	4.86E-08	0.00E+00	3.80E-07	0.00E+00	1.27E-05	4.58E+00	2.77E-06	9.16E+00	1.38E-06	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E+01	mg/kg	#######	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	0.00E+00	0.00E+00	2.60E-02	0.00E+00	0.00E+00	2.54E-02	0.00E+00	1.36E-02	0.00E+00	2.34E-03	0.00E+00	6.73E-02	3.28E+00	2.05E-02	1.31E+01	5.12E-03	0.01%	0.02%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	5.00E-07	0.00E+00	0.00E+00	1.45E-05	0.00E+00	5.95E-08	0.00E+00	4.66E-07	0.00E+00	1.55E-05	4.58E+00	3.39E-06	9.16E+00	1.70E-06	0.00%	0.00%
Copper	0.00E+00	mg/L	8.76E+00	mg/kg	6.53E+00	mg/kg	#######	1.11E+03	1.56E+00	1.45E+00	5.20E-01	6.22E-01	6.22E-01	8.97E-02	8.97E-02	0.00E+00	2.07E-02	1.54E-02	0.00E+00	1.03E-01	7.14E-02	0.00E+00	1.22E-01	0.00E+00	1.47E-03	0.00E+00	3.34E-01	1.17E+01	2.86E-02	1.51E+01	2.21E-02	0.01%	0.10%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.72E-04	mg/kg	#######		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.05E-07	0.00E+00	0.00E+00	1.14E-05	0.00E+00	1.24E-07	0.00E+00	3.78E-07	0.00E+00	1.23E-05	2.00E-02	6.15E-04	2.00E-01	6.15E-05	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-04	mg/kg	#######			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	5.61E-07	0.00E+00	0.00E+00	1.58E-05	0.00E+00	1.96E-07	0.00E+00	7.24E-07	0.00E+00	1.72E-05	9.20E-02	1.87E-04	9.20E-01	1.87E-05	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.93E-04	mg/kg	#######			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.55E-07	0.00E+00	0.00E+00	1.30E-05	0.00E+00	9.23E-08	0.00E+00	4.24E-07	0.00E+00	1.40E-05	8.00E-02	1.75E-04	2.90E-01	4.82E-05	0.00%	0.00%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	0.00E+00	mg/L	0.00E+00	mg/kg	9.10E+03	mg/kg	#######	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	0.00E+00	0.00E+00	2.15E+01	0.00E+00	0.00E+00	2.47E+00	0.00E+00	1.10E+00	0.00E+00	4.01E-02	0.00E+00	2.51E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	2.00E-03	mg/L	0.00E+00	mg/kg	2.21E+01	mg/kg	#######	4.48E+02	7.10E-02	4.50E-01	NA	6.78E-02	6.78E-02	1.16E-02	1.16E-02	1.65E-04	0.00E+00	5.21E-02	2.25E-03	0.00E+00	7.48E-02	NA	4.50E-02	0.00E+00	6.45E-04	0.00E+00	1.75E-01	8.00E+00	2.19E-02	8.00E+01	2.19E-03	0.01%	0.01%
Manganese	0.00E+00	mg/L	3.46E+02	mg/kg	8.30E+02	mg/kg	#######	2.50E+02	4.20E-01	2.26E-01	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	0.00E+00	8.17E-01	1.96E+00	0.00E+00	1.09E+00	1.41E+00	0.00E+00	1.97E+00	0.00E+00	1.58E-02	0.00E+00	7.27E+00	8.80E+01	8.26E-02	2.84E+02	2.56E-02	0.04%	0.11%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-02	mg/kg	#######		1.14E+00	7.64E+00	NA	1.41E+00	1.41E+00	9.15E-02	9.15E-02	0.00E+00	0.00E+00	1.27E-04	0.00E+00	0.00E+00	3.11E-03	NA	2.29E-03	0.00E+00	1.24E-05	0.00E+00	5.54E-03	1.00E+00	5.54E-03	3.00E+00	1.85E-03	0.00%	0.01%
Mercury (methyl)	0.00E+00	mg/L	5.78E-02	mg/kg	0.00E+00	mg/kg	#######		1.14E+00	NA	1.37E+00	NA	NA			0.00E+00	1.36E-04	0.00E+00	0.00E+00	4.94E-04	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	6.31E-04	1.50E-02	4.20E-02	2.50E-02	2.52E-02	0.02%	0.11%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.88E-04	mg/kg	#######			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	6.80E-07	0.00E+00	0.00E+00	2.03E-05	0.00E+00	2.99E-08	0.00E+00	6.34E-07	0.00E+00	2.17E-05	7.00E-02	3.09E-04	7.00E-01	3.09E-05	0.00%	0.00%
Nickel	0.00E+00	mg/L	8.62E+00	mg/kg	6.36E+00	mg/kg	#######		4.86E-01	1.06E+00	6.34E-02	6.84E-02	6.84E-02	8.71E-02	8.71E-02	0.00E+00	2.03E-02	1.50E-02	0.00E+00	3.15E-02	5.07E-02	0.00E+00	1.31E-02	0.00E+00	1.39E-03	0.00E+00	1.32E-01	4.00E+01	3.30E-03	8.00E+01	1.65E-03	0.00%	0.01%
Nitrate	3.25E-02	mg/L	5.95E-01	mg/kg	0.00E+00	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	2.68E-03	1.40E-03	0.00E+00	2.45E-02	1.88E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.05E-02	5.07E+02	6.01E-05	1.13E+03	2.70E-05	0.00%	0.00%
Nitrate/Nitrite	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	3.01E+02								0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.07E+02	0.00E+00	1.13E+03	0.00E+00	0.00%	0.00%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E-04	mg/kg	#######			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.02E-07	0.00E+00	0.00E+00	1.13E-05	0.00E+00	1.35E-07	0.00E+00	3.75E-07	0.00E+00	1.22E-05	4.58E+00	2.67E-06	9.16E+00	1.34E-06	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg				8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.62E-04	mg/kg	#######			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.32E-06	0.00E+00	0.00E+00	3.70E-05	0.00E+00	4.64E-07	0.00E+00	1.24E-06	0.00E+00	4.00E-05	2.40E-01	1.67E-04	2.40E+00	1.67E-05	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-01	mg/kg				8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.60E-02	0.00E+00	3.17E-04	0.00E+00	5.44E-04	0.00E+00	1.68E-02	2.40E-01	7.01E-02	2.40E+00	7.01E-03	0.03%	0.03%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	7.70E-02	mg/kg	#######			3.00E-01	NA	3.19E+01	3.19E+01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	1.82E-04	0.00E+00	0.00E+00	1.74E-04	NA	7.40E-02	0.00E+00	2.14E-05	0.00E+00	7.44E-02	8.50E+00	8.75E-03	2.55E+01	2.92E-03	0.00%	0.01%
Selenium	0.00E+00	mg/L	6.32E-01	mg/kg	3.74E-01	mg/kg	#######	2.05E+02	4.50E+00	1.21E+00	8.19E-01	4.59E-01	4.59E-01	1.51E-01	1.51E-01	0.00E+00	1.49E-03	8.81E-04	0.00E+00	2.14E-02	3.40E-03	0.00E+00	5.16E-03	0.00E+00	1.42E-04	0.00E+00	3.25E-02	2.00E-01	1.62E-01	3.30E-01	9.84E-02	0.07%	0.43%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.30E+01	mg/kg	#######		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	3.06E-02	0.00E+00	0.00E+00	8.50E-03	0.00E+00	8.21E-02	0.00E+00	3.61E-03	0.00E+00	1.25E-01	2.63E+02	4.75E-04	7.89E+02	1.58E-04	0.00%	0.00%
Sulfate	2.88E+00	mg/L	2.58E+01	mg/kg	1.30E+02	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	2.37E-01	6.09E-02	3.07E-01	2.17E+00	8.17E-02	2.94E-01	0.00E+00	8.22E-01	0.00E+00	3.61E-02	0.00E+00	4.01E+00	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	7.50E+01	4.50E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.40E-03	0.00E+00	7.40E-02	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	5.96E-07	0.00E+00	0.00E+00	1.73E-05	0.00E+00	7.09E-08	0.00E+00	5.55E-07	0.00E+00	1.85E-05	4.58E+00	4.04E-06	9.16E+00	2.02E-06	0.00%	0.00%
Vanadium	0.00E+00	mg/L	2.60E+01	mg/kg	1.45E+01	mg/kg	#######	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	0.00E+00	6.13E-02	3.41E-02	0.00E+00	8.21E-02	4.57E-03	0.00E+00	1.57E-03	0.00E+00	1.99E-04	0.00E+00	1.84E-01	2.10E-01	8.75E-01	2.10E+00	8.75E-02	0.39%	0.38%
Zinc	0.00E+00	mg/L	4.30E+01	mg/kg	4.79E+01	mg/kg	#######	2.91E+03	1.94E+00	6.34E+00	9.28E-01	8.84E-01	8.84E-01	1.84E-01	1.84E-01	0.00E+00	1.01E-01	1.13E-01	0.00E+00	6.26E-01	2.29E+00	0.00E+00	1.28E+00	0.00E+00	2.22E-02	0.00E+00	4.43E+00	1.60E+02	2.77E-02	3.20E+02	1.38E-02	0.01%	0.06%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.0%	0.0%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.8E-05	9.0E-06	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	4.7E-04	9.4E-05	0.0%	0.0%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.3E-02	1.3E-03	0.0%	0.0%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	4.6E-04	4.6E-05	0.0%	0.0%
Aldrin/Dieldrin/Endrin EEQ:	8.7E-04	9.3E-05	0.0%	0.0%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi x Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0.6	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.05	unitless
Aq. Invert diet fraction =	0.15	unitless
Terr. Invert diet fraction =	0.15	unitless
Mammal diet fraction =	0.05	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.01363	kg/d
Sediment ingestion rate =	0.01363	kg/d
Food ingestion rate =	0.29	kg/d
Body weight =	5.78	kg
Home range =	637.5293	acres
Water intake rate =	0.476	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-135
Tier 1 COPCs
EEQs and Hazard Indices for the Raccoon-Louisiana Black Bear at LHAAP
Low Impact Sub-Area/Saunders Branch Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
									---Unitless---						
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg				1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00
2,3,7,8-TCDD TEQ	0.00E+00	mg/L	6.98E-06	mg/kg	3.95E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.40E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	4.30E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.23E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.87E-04	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.76E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Aluminum	0.00E+00	mg/L	1.63E+04	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	6.37E-01	mg/kg				1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.07E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.42E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.11E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	7.47E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.50E-04	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00
Barium	0.00E+00	mg/L	1.60E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	6.80E-02	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	3.06E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00
Cadmium	0.00E+00	mg/L	2.14E-01	mg/kg	3.84E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.58E+01	1.24E+00	9.52E-01	9.52E-01	9.22E-01	9.22E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.88E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.22E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Copper	0.00E+00	mg/L	1.07E+01	mg/kg	7.43E+00	mg/kg	1.00E+00	5.92E+03	5.25E+00	1.32E+00	4.60E-01	5.75E-01	5.75E-01	1.49E-01	1.49E-01
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.86E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.75E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.20E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00
Iron	0.00E+00	mg/L	0.00E+00	mg/kg	1.00E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01		
Lead	3.00E-03	mg/L	0.00E+00	mg/kg	2.51E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	4.39E-01	NA	6.40E-02	6.40E-02	1.33E-02	1.33E-02
Manganese	0.00E+00	mg/L	4.88E+02	mg/kg	9.35E+02	mg/kg	1.00E+00	2.00E+03	2.10E+00	2.21E-01	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.95E-02	mg/kg	1.00E+00		2.87E+00	7.16E+00	NA	1.35E+00	1.35E+00	1.03E-01	1.03E-01
Mercury (methyl)	0.00E+00	mg/L	8.01E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.17E+00	NA	NA		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.41E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00
Nickel	0.00E+00	mg/L	1.10E+01	mg/kg	7.10E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	5.96E-02	6.65E-02	6.65E-02	1.01E-01	1.01E-01
Nitrate	9.00E-02	mg/L	9.88E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Nitrate/Nitrite	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg				1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	8.83E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	4.23E-01	mg/kg				1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.80E-01	mg/kg	1.00E+00			1.14E+00	NA	1.88E+01	1.88E+01	1.66E-01	1.66E-01
Selenium	0.00E+00	mg/L	8.74E-01	mg/kg	4.13E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.18E+00	1.06E+00	4.64E-01	4.64E-01	1.95E-01	1.95E-01
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Sulfate	5.00E+00	mg/L	3.00E+01	mg/kg	2.30E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Thallium	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.04E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Vanadium	0.00E+00	mg/L	3.08E+01	mg/kg	1.53E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03
Zinc	0.00E+00	mg/L	5.15E+01	mg/kg	5.89E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.53E+00	8.57E-01	8.08E-01	8.08E-01	4.51E-01	4.51E-01

Chemical	EED Surface Water (mg/kg-d)	EED Sediment (mg/kg-d)	EED Soil (mg/kg-d)	EED Fish (mg/kg-d)	EED Aq. Invert. (mg/kg-d)	EED Terr. Invert. (mg/kg-d)	EED Aq. Plants (mg/kg-d)	EED Terr. Plants (mg/kg-d)	EED Plant Roots (mg/kg-d)	EED Mammals (mg/kg-d)	EED Birds (mg/kg-d)	Total EED (mg/kg-d)	NOAEL (mg/kg-d)	EEQ N	LOAEL (mg/kg-d)	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	0.00E+00	2.89E-09	1.63E-09	0.00E+00	6.78E-07	3.89E-07	0.00E+00	3.19E-10	0.00E+00	3.56E-10	0.00E+00	1.07E-06	1.00E-06	1.07E+00	1.00E-05	1.07E-01	0.61%	0.60%
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	0.00E+00	5.80E-07	0.00E+00	0.00E+00	9.65E-05	0.00E+00	1.99E-06	0.00E+00	2.39E-06	0.00E+00	1.01E-04	8.00E-01	1.27E-04	4.00E+00	2.54E-05	0.00%	0.00%
4,4'-DDE	0.00E+00	0.00E+00	1.78E-06	0.00E+00	0.00E+00	2.98E-04	0.00E+00	4.73E-05	0.00E+00	6.32E-06	0.00E+00	3.53E-04	8.00E-01	4.41E-04	4.00E+00	8.83E-05	0.00%	0.00%
4,4'-DDT	0.00E+00	0.00E+00	9.23E-07	0.00E+00	0.00E+00	1.59E-04	0.00E+00	3.17E-06	0.00E+00	5.48E-06	0.00E+00	1.69E-04	8.00E-01	2.11E-04	4.00E+00	4.22E-05	0.00%	0.00%
Aldrin	0.00E+00	0.00E+00	7.75E-08	0.00E+00	0.00E+00	1.33E-05	0.00E+00	2.25E-08	0.00E+00	3.19E-07	0.00E+00	1.38E-05	2.00E-01	6.88E-05	1.00E+00	1.38E-05	0.00%	0.00%
alpha-Chlordane	0.00E+00	0.00E+00	1.56E-07	0.00E+00	0.00E+00	2.63E-05	0.00E+00	2.69E-07	0.00E+00	6.41E-07	0.00E+00	2.74E-05	4.58E+00	5.98E-06	9.16E+00	2.99E-06	0.00%	0.00%
Aluminum	0.00E+00	6.75E+00	0.00E+00	0.00E+00	3.26E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.32E+02	1.93E+00	1.72E+02	1.93E+01	1.72E+01	97.78%	96.33%
Antimony	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.22E-03	0.00E+00	7.91E-04	0.00E+00	1.57E-04	0.00E+00	4.17E-03	1.25E-01	3.34E-02	1.25E+00	3.34E-03	0.02%	0.02%
Aroclor 1242	0.00E+00	0.00E+00	1.27E-06	0.00E+00	0.00E+00	2.15E-04	0.00E+00	8.88E-06	0.00E+00	5.23E-06	0.00E+00	2.31E-04	6.85E-02	3.37E-03	6.85E-01	3.37E-04	0.00%	0.00%
Aroclor 1248	0.00E+00	0.00E+00	5.88E-07	0.00E+00	0.00E+00	9.96E-05	0.00E+00	2.55E-07	0.00E+00	2.42E-06	0.00E+00	1.03E-04	6.80E-02	1.51E-03	6.90E-01	1.49E-04	0.00%	0.00%
Aroclor 1254	0.00E+00	0.00E+00	1.70E-06	0.00E+00	0.00E+00	2.96E-04	0.00E+00	6.45E-07	0.00E+00	6.46E-06	0.00E+00	3.04E-04	6.80E-02	4.48E-03	6.90E-01	4.41E-04	0.00%	0.00%
Aroclor 1260	0.00E+00	0.00E+00	3.09E-06	0.00E+00	0.00E+00	5.65E-04	0.00E+00	6.03E-07	0.00E+00	2.12E-05	0.00E+00	5.90E-04	6.80E-02	8.68E-03	6.90E-01	8.55E-04	0.00%	0.00%
Aroclor 1268	0.00E+00	0.00E+00	3.52E-07	0.00E+00	0.00E+00	5.28E-05	0.00E+00	7.94E-06	0.00E+00	1.45E-06	0.00E+00	6.26E-05	6.80E-02	9.20E-04	6.90E-01	9.07E-05	0.00%	0.00%
Barium	0.00E+00	6.64E-02	0.00E+00	0.00E+00	3.20E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.27E+00	5.10E+00	6.40E-01	1.98E+01	1.65E-01	0.36%	0.92%
Benzoic Acid	0.00E+00	0.00E+00	2.82E-05	0.00E+00	0.00E+00	4.00E-03	0.00E+00	3.88E-03	0.00E+00	1.16E-04	0.00E+00	8.03E-03	4.00E+00	2.01E-03	4.00E+01	2.01E-04	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	1.27E-04	0.00E+00	0.00E+00	2.97E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.98E-02	1.83E+01	1.63E-03	1.83E+02	1.63E-04	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	8.86E-05	1.59E-04	0.00E+00	7.59E-03	4.40E-02	0.00E+00	6.49E-03	0.00E+00	5.24E-04	0.00E+00	5.88E-02	1.00E+00	5.88E-02	1.00E+01	5.88E-03	0.03%	0.03%
Chlordane	0.00E+00	0.00E+00	7.77E-08	0.00E+00	0.00E+00	1.31E-05	0.00E+00	1.34E-07	0.00E+00	3.20E-07	0.00E+00	1.36E-05	4.58E+00	2.98E-06	9.16E+00	1.49E-06	0.00%	0.00%
Chromium	0.00E+00	0.00E+00	5.07E-03	0.00E+00	0.00E+00	1.72E-01	0.00E+00	1.04E-01	0.00E+00	6.04E-03	0.00E+00	2.87E-01	3.28E+00	8.76E-02	1.31E+01	2.19E-02	0.05%	0.12%
cis-Nonachlor	0.00E+00	0.00E+00	1.03E-07	0.00E+00	0.00E+00	1.73E-05	0.00E+00	1.77E-07	0.00E+00	4.22E-07	0.00E+00	1.80E-05	4.58E+00	3.93E-06	9.16E+00	1.97E-06	0.00%	0.00%
Copper	0.00E+00	4.44E-03	3.08E-03	0.00E+00	2.50E-01	4.34E-02	0.00E+00	7.58E-02	0.00E+00	1.64E-03	0.00E+00	3.78E-01	1.17E+01	3.23E-02	1.51E+01	2.50E-02	0.02%	0.14%
Dieldrin	0.00E+00	0.00E+00	7.69E-08	0.00E+00	0.00E+00	1.26E-05	0.00E+00	5.40E-06	0.00E+00	3.16E-07	0.00E+00	1.84E-05	2.00E-02	9.19E-04	2.00E-01	9.19E-05	0.00%	0.00%
Endrin	0.00E+00	0.00E+00	1.14E-07	0.00E+00	0.00E+00	1.87E-05	0.00E+00	1.87E-07	0.00E+00	4.96E-07	0.00E+00	1.95E-05	9.20E-02	2.11E-04	9.20E-01	2.11E-05	0.00%	0.00%
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	0.00E+00	9.13E-08	0.00E+00	0.00E+00	1.52E-05	0.00E+00	7.39E-08	0.00E+00	3.76E-07	0.00E+00	1.57E-05	8.00E-02	1.96E-04	2.90E-01	5.42E-05	0.00%	0.00%
HMX	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	0.00E+00	0.00E+00	4.16E+00	0.00E+00	0.00E+00	3.47E+00	0.00E+00	7.12E-01	0.00E+00	3.07E-02	0.00E+00	8.37E+00	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	2.47E-04	0.00E+00	1.04E-02	6.66E-03	0.00E+00	4.90E-02	NA	2.86E-02	0.00E+00	4.95E-04	0.00E+00	9.54E-02	8.00E+00	1.19E-02	8.00E+01	1.19E-03	0.01%	0.01%
Manganese	0.00E+00	2.02E-01	3.87E-01	0.00E+00	4.55E+00	9.17E-01	0.00E+00	1.66E+00	0.00E+00	1.32E-02	0.00E+00	7.73E+00	8.80E+01	8.78E-02	2.84E+02	2.72E-02	0.05%	0.15%
Mercury (inorganic)	0.00E+00	0.00E+00	2.47E-05	0.00E+00	0.00E+00	1.89E-03	NA	1.42E-03	0.00E+00	9.07E-06	0.00E+00	3.35E-03	1.00E+00	3.35E-03	3.00E+00	1.12E-03	0.00%	0.01%
Mercury (methyl)	0.00E+00	3.32E-05	0.00E+00	0.00E+00	1.02E-03	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	1.05E-03	1.50E-02	7.02E-02	2.50E-02	4.21E-02	0.04%	0.24%
Mirex	0.00E+00	0.00E+00	1.41E-07	0.00E+00	0.00E+00	2.46E-05	0.00E+00	2.08E-07	0.00E+00	5.82E-07	0.00E+00	2.55E-05	7.00E-02	3.65E-04	7.00E-01	3.65E-05	0.00%	0.00%
Nickel	0.00E+00	4.57E-03	2.94E-03	0.00E+00	1.14E-01	1.49E-01	0.00E+00	8.39E-03	0.00E+00	1.06E-03	0.00E+00	2.80E-01	4.00E+01	6.99E-03	8.00E+01	3.50E-03	0.00%	0.02%
Nitrate	7.41E-03	4.09E-04	0.00E+00	1.42E-01	9.21E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E-01	5.07E+02	3.14E-04	1.13E+03	1.41E-04	0.00%	0.00%
Nitrate/Nitrite	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.07E+02	0.00E+00	1.13E+03	0.00E+00	0.00%	0.00%
Oxychlordane	0.00E+00	0.00E+00	7.28E-08	0.00E+00	0.00E+00	1.19E-05	0.00E+00	8.22E-08	0.00E+00	3.00E-07	0.00E+00	1.24E-05	4.58E+00	2.70E-06	9.16E+00	1.35E-06	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	0.00E+00	3.66E-07	0.00E+00	0.00E+00	5.95E-05	0.00E+00	5.25E-07	0.00E+00	1.51E-06	0.00E+00	6.19E-05	2.40E-01	2.58E-04	2.40E+00	2.58E-05	0.00%	0.00%
Pentachlorophenol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.79E-02	0.00E+00	5.29E-04	0.00E+00	7.20E-04	0.00E+00	2.91E-02	2.40E-01	1.21E-01	2.40E+00	1.21E-02	0.07%	0.07%
Perchlorate	0.00E+00	0.00E+00	1.16E-04	0.00E+00	0.00E+00	1.42E-03	NA	9.34E-02	0.00E+00	6.88E-05	0.00E+00	9.50E-02	8.50E+00	1.12E-02	2.55E+01	3.72E-03	0.01%	0.02%
Selenium	0.00E+00	3.62E-04	1.71E-04	0.00E+00	1.75E-02	2.16E-03	0.00E+00	3.40E-03	0.00E+00	1.19E-04	0.00E+00	2.37E-02	2.00E-01	1.18E-01	3.30E-01	7.17E-02	0.07%	0.40%
Silver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	0.00E+00	5.91E-03	0.00E+00	0.00E+00	1.76E-02	0.00E+00	8.87E-02	0.00E+00	3.51E-03	0.00E+00	1.16E-01	2.63E+02	4.40E-04	7.89E+02	1.47E-04	0.00%	0.00%
Sulfate	4.12E-01	1.24E-02	9.53E-02	7.90E+00	2.80E-01	1.16E+00	0.00E+00	1.43E+00	0.00E+00	5.65E-02	0.00E+00	1.13E+01	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.40E-03	0.00E+00	7.40E-02	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	0.00E+00	1.26E-07	0.00E+00	0.00E+00	2.12E-05	0.00E+00	2.17E-07	0.00E+00	5.17E-07	0.00E+00	2.21E-05	4.58E+00	4.82E-06	9.16E+00	2.41E-06	0.00%	0.00%
Vanadium	0.00E+00	1.28E-02	6.35E-03	0.00E+00	2.87E-01	5.99E-03	0.00E+00	1.09E-03	0.00E+00	1.34E-04	0.00E+00	3.13E-01	2.10E-01	1.49E+00	2.10E+00	1.49E-01	0.85%	0.83%
Zinc	0.00E+00	2.13E-02	2.44E-02	0.00E+00	1.72E+00	1.44E+00	0.00E+00	8.44E-01	0.00E+00	3.93E-02	0.00E+00	4.09E+00	1.60E+02	2.56E-02	3.20E+02	1.28E-02	0.01%	0.07%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.0%	0.0%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	2.0E-05	1.0E-05	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	7.8E-04	1.6E-04	0.0%	0.0%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.9E-02	1.9E-03	0.0%	0.0%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	1.6E-03	1.6E-04	0.0%	0.0%
Aldrin/Dieldrin/Endrin EEQ:	1.2E-03	1.3E-04	0.0%	0.0%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi \, x \, Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text tables.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0.6	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.05	unitless
Aq. Invert diet fraction =	0.15	unitless
Terr. Invert diet fraction =	0.15	unitless
Mammal diet fraction =	0.05	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.002394	kg/d
Sediment ingestion rate =	0.002394	kg/d
Food ingestion rate =	0.171	kg/d
Body weight =	5.78	kg
Home range =	2011	acres
Water intake rate =	0.476	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-136
Tier 2 COPCs
EEQs and Hazard Indices for the Raccoon-Louisiana Black Bear at LHAAP
Low Impact Sub-Area/Saunders Branch Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							Unitless	Unitless	Unitless	Unitless	Unitless	Unitless	Unitless	Unitless	Unitless	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg				7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	0.00E+00	mg/L	6.98E-06	mg/kg	3.18E-06	mg/kg	#######	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	0.00E+00	2.89E-09	1.32E-09	0.00E+00	1.45E-07	1.56E-07	0.00E+00	2.19E-10	0.00E+00	2.23E-10	0.00E+00	3.05E-07	1.00E-06	3.05E-01	1.00E-05	3.05E-02	0.24%	0.24%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	8.00E-04	mg/kg	#######		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.32E-07	0.00E+00	0.00E+00	3.18E-05	0.00E+00	3.98E-07	0.00E+00	1.04E-06	0.00E+00	3.36E-05	8.00E-01	4.19E-05	4.00E+00	8.39E-06	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	3.10E-03	mg/kg	#######		4.75E+00	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	1.28E-06	0.00E+00	0.00E+00	1.24E-04	0.00E+00	7.48E-06	0.00E+00	4.32E-06	0.00E+00	1.37E-04	8.00E-01	1.71E-04	4.00E+00	3.42E-05	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.07E-03	mg/kg	#######		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	4.42E-07	0.00E+00	0.00E+00	4.40E-05	0.00E+00	5.31E-07	0.00E+00	1.40E-06	0.00E+00	4.64E-05	8.00E-01	5.79E-05	4.00E+00	1.16E-05	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	#######			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	7.29E-08	0.00E+00	0.00E+00	7.24E-06	0.00E+00	1.52E-08	0.00E+00	2.28E-07	0.00E+00	7.55E-06	2.00E-01	3.78E-05	1.00E+00	7.55E-06	0.00%	0.00%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.15E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.31E-07	0.00E+00	0.00E+00	1.27E-05	0.00E+00	5.22E-08	0.00E+00	4.09E-07	0.00E+00	1.33E-05	4.58E+00	2.90E-06	9.16E+00	1.45E-06	0.00%	0.00%
Aluminum	0.00E+00	mg/L	1.18E+04	mg/kg	0.00E+00	mg/kg	#######	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	0.00E+00	4.90E+00	0.00E+00	0.00E+00	2.36E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.41E+02	1.93E+00	1.25E+02	1.93E+01	1.25E+01	98.86%	97.60%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-01	mg/kg				3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.78E-04	0.00E+00	3.35E-04	0.00E+00	8.34E-05	0.00E+00	1.10E-03	1.25E-01	8.77E-03	1.25E+00	8.77E-04	0.01%	0.01%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.55E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.06E-06	0.00E+00	0.00E+00	1.03E-04	0.00E+00	3.80E-07	0.00E+00	3.31E-06	0.00E+00	1.08E-04	6.85E-02	1.58E-03	6.85E-01	1.58E-04	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.21E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	5.01E-07	0.00E+00	0.00E+00	4.89E-05	0.00E+00	1.80E-07	0.00E+00	1.57E-06	0.00E+00	5.11E-05	6.80E-02	7.52E-04	6.90E-01	7.41E-05	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	3.32E-03	mg/kg	#######		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	1.37E-06	0.00E+00	0.00E+00	1.38E-04	0.00E+00	2.11E-07	0.00E+00	2.44E-06	0.00E+00	1.42E-04	6.80E-02	2.08E-03	6.90E-01	2.05E-04	0.00%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	4.07E-03	mg/kg	#######			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	1.69E-06	0.00E+00	0.00E+00	1.78E-04	0.00E+00	4.64E-08	0.00E+00	1.01E-05	0.00E+00	1.89E-04	6.80E-02	2.79E-03	6.90E-01	2.75E-04	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	7.92E-04	mg/kg	#######			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.28E-07	0.00E+00	0.00E+00	2.84E-05	0.00E+00	7.40E-06	0.00E+00	1.03E-06	0.00E+00	3.71E-05	6.80E-02	5.46E-04	6.90E-01	5.38E-05	0.00%	0.00%
Barium	0.00E+00	mg/L	1.24E+02	mg/kg	0.00E+00	mg/kg	#######	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	5.13E-02	0.00E+00	0.00E+00	2.47E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.52E+00	5.10E+00	4.95E-01	1.98E+01	1.28E-01	0.39%	1.00%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	5.10E-02	mg/kg	#######			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.11E-05	0.00E+00	0.00E+00	1.73E-03	0.00E+00	2.91E-03	0.00E+00	6.61E-05	0.00E+00	4.73E-03	4.00E+00	1.18E-03	4.00E+01	1.18E-04	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.27E-01	mg/kg	0.00E+00	mg/kg	#######	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	0.00E+00	9.40E-05	0.00E+00	0.00E+00	4.70E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.80E-03	1.83E+01	2.62E-04	1.83E+02	2.62E-05	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	mg/L	1.62E-01	mg/kg	3.02E-01	mg/kg	#######	1.15E+03	6.00E-01	2.87E+01	1.40E+00	1.06E+00	1.06E+00	6.72E-01	6.72E-01	0.00E+00	6.71E-05	1.25E-04	0.00E+00	4.31E-04	3.86E-02	0.00E+00	5.69E-03	0.00E+00	3.01E-04	0.00E+00	4.52E-02	1.00E+00	4.52E-02	1.00E+01	4.52E-03	0.04%	0.04%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	7.17E-08	0.00E+00	0.00E+00	6.98E-06	0.00E+00	2.86E-08	0.00E+00	2.24E-07	0.00E+00	7.30E-06	4.58E+00	1.59E-06	9.16E+00	7.97E-07	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E+01	mg/kg	#######	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	0.00E+00	0.00E+00	4.57E-03	0.00E+00	0.00E+00	1.50E-02	0.00E+00	8.02E-03	0.00E+00	1.38E-03	0.00E+00	2.89E-02	3.28E+00	8.82E-03	1.31E+01	2.20E-03	0.01%	0.02%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	8.78E-08	0.00E+00	0.00E+00	8.55E-06	0.00E+00	3.51E-08	0.00E+00	2.75E-07	0.00E+00	8.95E-06	4.58E+00	1.95E-06	9.16E+00	9.77E-07	0.00%	0.00%
Copper	0.00E+00	mg/L	8.76E+00	mg/kg	6.53E+00	mg/kg	#######	1.11E+03	1.56E+00	1.45E+00	5.20E-01	6.22E-01	6.22E-01	8.97E-02	8.97E-02	0.00E+00	3.63E-03	2.70E-03	0.00E+00	6.06E-02	4.21E-02	0.00E+00	7.21E-02	0.00E+00	8.66E-04	0.00E+00	1.82E-01	1.17E+01	1.56E-02	1.51E+01	1.20E-02	0.01%	0.09%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.72E-04	mg/kg	#######		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	7.12E-08	0.00E+00	0.00E+00	6.72E-06	0.00E+00	7.32E-08	0.00E+00	2.23E-07	0.00E+00	7.08E-06	2.00E-02	3.54E-04	2.00E-01	3.54E-05	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-04	mg/kg	#######			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	9.85E-08	0.00E+00	0.00E+00	9.29E-06	0.00E+00	1.16E-07	0.00E+00	4.27E-07	0.00E+00	9.93E-06	9.20E-02	1.08E-04	9.20E-01	1.08E-05	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.93E-04	mg/kg	#######			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	8.00E-08	0.00E+00	0.00E+00	7.67E-06	0.00E+00	5.44E-08	0.00E+00	2.50E-07	0.00E+00	8.05E-06	8.00E-02	1.01E-04	2.90E-01	2.78E-05	0.00%	0.00%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	0.00E+00	mg/L	0.00E+00	mg/kg	9.10E+03	mg/kg	#######	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	0.00E+00	0.00E+00	3.77E+00	0.00E+00	0.00E+00	1.45E+00	0.00E+00	6.46E-01	0.00E+00	2.37E-02	0.00E+00	5.89E+00	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	2.00E-03	mg/L	0.00E+00	mg/kg	2.21E+01	mg/kg	#######	4.48E+02	7.10E-02	4.50E-01	NA	6.78E-02	6.78E-02	1.16E-02	1.16E-02	1.65E-04	0.00E+00	9.14E-03	1.33E-03	0.00E+00	4.41E-02	NA	2.66E-02	0.00E+00	3.80E-04	0.00E+00	8.17E-02	8.00E+00	1.02E-02	8.00E+01	1.02E-03	0.01%	0.01%
Manganese	0.00E+00	mg/L	3.46E+02	mg/kg	8.30E+02	mg/kg	#######	2.50E+02	4.20E-01	2.26E-01	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	0.00E+00	1.43E-01	3.44E-01	0.00E+00	6.45E-01	8.32E-01	0.00E+00	1.16E+00	0.00E+00	9.31E-03	0.00E+00	3.14E+00	8.80E+01	3.57E-02	2.84E+02	1.10E-02	0.03%	0.09%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-02	mg/kg	#######		1.14E+00	7.64E+00	NA	1.41E+00	1.41E+00	9.15E-02	9.15E-02	0.00E+00	0.00E+00	2.24E-05	0.00E+00	0.00E+00	1.83E-03	NA	1.35E-03	0.00E+00	7.31E-06	0.00E+00	3.21E-03	1.00E+00	3.21E-03	3.00E+00	1.07E-03	0.00%	0.01%
Mercury (methyl)	0.00E+00	mg/L	5.78E-02	mg/kg	0.00E+00	mg/kg	#######		1.14E+00	NA	1.37E+00	NA	NA			0.00E+00	2.39E-05	0.00E+00	0.00E+00	2.91E-04	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	3.15E-04	1.50E-02	2.10E-02	2.50E-02	1.26E-02	0.02%	0.10%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.88E-04	mg/kg	#######			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.19E-07	0.00E+00	0.00E+00	1.20E-05	0.00E+00	1.76E-08	0.00E+00	3.74E-07	0.00E+00	1.25E-05	7.00E-02	1.78E-04	7.00E-01	1.78E-05	0.00%	0.00%
Nickel	0.00E+00	mg/L	8.62E+00	mg/kg	6.36E+00	mg/kg	#######		4.86E-01	1.06E+00	6.34E-02	6.84E-02	6.84E-02	8.71E-02	8.71E-02	0.00E+00	3.57E-03	2.63E-03	0.00E+00	1.86E-02	2.99E-02	0.00E+00	7.72E-03	0.00E+00	8.19E-04	0.00E+00	6.32E-02	4.00E+01	1.58E-03	8.00E+01	7.90E-04	0.00%	0.01%
Nitrate	3.25E-02	mg/L	5.95E-01	mg/kg	0.00E+00	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	2.68E-03	2.46E-04	0.00E+00	1.45E-02	1.11E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.85E-02	5.07E+02	3.65E-05	1.13E+03	1.64E-05	0.00%	0.00%
Nitrate/Nitrite	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	3.01E+02								0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.07E+02	0.00E+00	1.13E+03	0.00E+00	0.00%	0.00%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E-04	mg/kg	#######			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	7.07E-08	0.00E+00	0.00E+00	6.67E-06	0.00E+00	7.98E-08	0.00E+00	2.21E-07	0.00E+00	7.04E-06	4.58E+00	1.54E-06	9.16E+00	7.69E-07	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg				8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.62E-04	mg/kg	#######			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.33E-07	0.00E+00	0.00E+00	2.18E-05	0.00E+00	2.73E-07	0.00E+00	7.28E-07	0.00E+00	2.31E-05	2.40E-01	9.61E-05	2.40E+00	9.61E-06	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-01	mg/kg				8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.41E-03	0.00E+00	1.87E-04	0.00E+00	3.21E-04	0.00E+00	9.91E-03	2.40E-01	4.13E-02	2.40E+00	4.13E-03	0.03%	0.03%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	7.70E-02	mg/kg	#######			3.00E-01	NA	3.19E+01	3.19E+01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	3.19E-05	0.00E+00	0.00E+00	1.03E-04	NA	4.36E-02	0.00E+00	1.26E-05	0.00E+00	4.38E-02	8.50E+00	5.15E-03	2.55E+01	1.72E-03	0.00%	0.01%
Selenium	0.00E+00	mg/L	6.32E-01	mg/kg	3.74E-01	mg/kg	#######	2.05E+02	4.50E+00	1.21E+00	8.19E-01	4.59E-01	4.59E-01	1.51E-01	1.51E-01	0.00E+00	2.62E-04	1.55E-04	0.00E+00	1.26E-02	2.01E-03	0.00E+00	3.04E-03	0.00E+00	8.34E-05	0.00E+00	1.82E-02	2.00E-01	9.09E-02	3.30E-01	5.51E-02	0.07%	0.43%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.30E+01	mg/kg	#######		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	5.38E-03	0.00E+00	0.00E+00	5.01E-03	0.00E+00	4.84E-02	0.00E+00	2.13E-03	0.00E+00	6.09E-02	2.63E+02	2.32E-04	7.89E+02	7.72E-05	0.00%	0.00%
Sulfate	2.88E+00	mg/L	2.58E+01	mg/kg	1.30E+02	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	2.37E-01	1.07E-02	5.38E-02	1.28E+00	4.81E-02	1.73E-01	0.00E+00	4.85E-01	0.00E+00	2.13E-02	0.00E+00	2.31E+00	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	7.50E+01	4.50E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.40E-03	0.00E+00	7.40E-02	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.05E-07	0.00E+00	0.00E+00	1.02E-05	0.00E+00	4.18E-08	0.00E+00	3.28E-07	0.00E+00	1.07E-05	4.58E+00	2.33E-06	9.16E+00	1.16E-06	0.00%	0.00%
Vanadium	0.00E+00	mg/L	2.60E+01	mg/kg	1.45E+01	mg/kg	#######	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	0.00E+00	1.08E-02	5.99E-03	0.00E+00	4.84E-02	2.70E-03	0.00E+00	9.25E-04	0.00E+00	1.17E-04	0.00E+00	6.89E-02	2.10E-01	3.28E-01	2.10E+00	3.28E-02	0.26%	0.26%
Zinc	0.00E+00	mg/L	4.30E+01	mg/kg	4.79E+01	mg/kg	#######	2.91E+03	1.94E+00	6.34E+00	9.28E-01	8.84E-01	8.84E-01	1.84E-01	1.84E-01	0.00E+00	1.78E-02	1.99E-02	0.00E+00	3.69E-01	1.35E+00	0.00E+00	7.53E-01	0.00E+00	1.31E-02	0.00E+00	2.52E+00	1.60E+02	1.58E-02	3.20E+02	7.88E-03	0.01%	0.06%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.0%	0.0%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.0E-05	5.2E-06	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	2.7E-04	5.4E-05	0.0%	0.0%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	7.7E-03	7.7E-04	0.0%	0.0%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	2.6E-04	2.6E-05	0.0%	0.0%
Aldrin/Dieldrin/Endrin EEQ:	5.0E-04	5.4E-05	0.0%	0.0%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi \, x Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0.6	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.05	unitless
Aq. Invert diet fraction =	0.15	unitless
Terr. Invert diet fraction =	0.15	unitless
Mammal diet fraction =	0.05	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.002394	kg/d
Sediment ingestion rate =	0.002394	kg/d
Food ingestion rate =	0.171	kg/d
Body weight =	5.78	kg
Home range =	2011	acres
Water intake rate =	0.476	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-137
Tier 1 COPCs
EEQs and Hazard Indices for the Short-tailed Shrew at LHAAP
Low Impact Sub-Area/Saunders Branch Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Total Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							Unitless	Unitless	Unitless	Unitless	Unitless	Unitless	Unitless	Unitless	Unitless	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg				1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	0.00E+00	mg/L	6.98E-06	mg/kg	3.95E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	0.00E+00	0.00E+00	5.52E-08	0.00E+00	0.00E+00	9.43E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.49E-06	1.00E-06	9.49E+00	1.00E-05	9.49E-01	48.92%	37.18%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.42E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.98E-05	0.00E+00	0.00E+00	2.36E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.38E-03	8.00E-01	2.98E-03	4.00E+00	5.96E-04	0.02%	0.02%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	4.15E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	5.79E-05	0.00E+00	0.00E+00	6.95E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.01E-03	8.00E-01	8.76E-03	4.00E+00	1.75E-03	0.05%	0.07%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.82E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	0.00E+00	2.55E-05	0.00E+00	0.00E+00	3.15E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.18E-03	8.00E-01	3.97E-03	4.00E+00	7.94E-04	0.02%	0.03%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.04E-04	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.84E-06	0.00E+00	0.00E+00	3.51E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-04	2.00E-01	1.77E-03	1.00E+00	3.54E-04	0.01%	0.01%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.68E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	5.14E-06	0.00E+00	0.00E+00	6.23E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.28E-04	4.58E+00	1.37E-04	9.16E+00	6.86E-05	0.00%	0.00%
Aluminum	0.00E+00	mg/L	1.63E+04	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.93E+00	0.00E+00	1.93E+01	0.00E+00	0.00%	0.00%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.68E-01	mg/kg				1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.95E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.95E-02	1.25E-01	5.56E-01	1.25E+00	5.56E-02	2.87%	2.18%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.04E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.24E-05	0.00E+00	0.00E+00	5.16E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.20E-03	6.85E-02	7.59E-02	6.85E-01	7.59E-03	0.39%	0.30%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.37E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.92E-05	0.00E+00	0.00E+00	2.33E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.35E-03	6.80E-02	3.45E-02	6.80E-01	3.45E-03	0.18%	0.14%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.04E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	0.00E+00	5.64E-05	0.00E+00	0.00E+00	7.04E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.09E-03	6.80E-02	1.04E-01	6.80E-01	1.04E-02	0.54%	0.41%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	6.22E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	8.69E-05	0.00E+00	0.00E+00	1.14E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E-02	6.80E-02	1.69E-01	6.80E-01	1.69E-02	0.87%	0.66%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.97E-04	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.25E-05	0.00E+00	0.00E+00	1.35E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E-03	6.80E-02	2.00E-02	6.80E-01	2.00E-03	0.10%	0.08%
Barium	0.00E+00	mg/L	1.60E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E+00	0.00E+00	1.98E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	2.50E-02	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.49E-04	0.00E+00	0.00E+00	3.57E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.60E-02	4.00E+00	9.00E-03	4.00E+01	9.00E-04	0.05%	0.04%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	3.06E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	mg/L	2.14E-01	mg/kg	3.95E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.55E+01	1.24E+00	9.40E-01	9.40E-01	9.22E-01	9.22E-01	0.00E+00	0.00E+00	5.52E-03	0.00E+00	0.00E+00	1.08E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E+00	1.00E+00	1.09E+00	1.00E+01	1.09E-01	5.60%	4.26%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.93E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.70E-06	0.00E+00	0.00E+00	3.27E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.30E-04	4.58E+00	7.20E-05	9.16E+00	3.60E-05	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.16E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	0.00E+00	0.00E+00	1.62E-01	0.00E+00	0.00E+00	3.95E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.11E+00	3.28E+00	1.25E+00	1.31E+01	3.13E-01	6.46%	12.25%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.52E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.52E-06	0.00E+00	0.00E+00	4.27E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.30E-04	4.58E+00	9.40E-05	9.16E+00	4.70E-05	0.00%	0.00%
Copper	0.00E+00	mg/L	1.07E+01	mg/kg	7.35E+00	mg/kg	1.00E+00	5.92E+03	5.25E+00	1.33E+00	4.60E-01	5.79E-01	5.79E-01	1.49E-01	1.49E-01	0.00E+00	0.00E+00	1.03E-01	0.00E+00	0.00E+00	1.05E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E+00	1.17E+01	9.84E-02	1.51E+01	7.61E-02	0.51%	2.98%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.88E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.63E-06	0.00E+00	0.00E+00	3.09E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.12E-04	2.00E-02	1.56E-02	2.00E-01	1.56E-03	0.08%	0.06%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.77E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	3.87E-06	0.00E+00	0.00E+00	4.54E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E-04	9.20E-02	4.98E-03	9.20E-01	4.98E-04	0.03%	0.02%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.36E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.30E-06	0.00E+00	0.00E+00	3.93E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.97E-04	8.00E-02	4.96E-03	2.90E-01	1.37E-03	0.03%	0.05%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	0.00E+00	mg/L	0.00E+00	mg/kg	1.01E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	0.00E+00	0.00E+00	1.40E+02	0.00E+00	0.00E+00	8.43E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.25E+02	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	3.00E-03	mg/L	0.00E+00	mg/kg	2.30E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	4.47E-01	NA	6.65E-02	6.65E-02	1.33E-02	1.33E-02	6.60E-04	0.00E+00	3.22E-01	0.00E+00	0.00E+00	1.11E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.43E+00	8.00E+00	1.78E-01	8.00E+01	1.78E-02	0.92%	0.70%
Manganese	0.00E+00	mg/L	4.88E+02	mg/kg	9.62E+02	mg/kg	1.00E+00	2.00E+03	2.10E+00	2.20E-01	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	0.00E+00	0.00E+00	1.34E+01	0.00E+00	0.00E+00	2.27E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.62E+01	8.80E+01	4.11E-01	2.84E+02	1.27E-01	2.12%	4.99%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.69E-02	mg/kg	1.00E+00		2.87E+00	7.38E+00	NA	1.38E+00	1.38E+00	1.03E-01	1.03E-01	0.00E+00	0.00E+00	7.94E-04	0.00E+00	0.00E+00	4.51E-02	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.59E-02	1.32E+01	3.48E-03	3.96E+01	1.16E-03	0.02%	0.05%
Mercury (methyl)	0.00E+00	mg/L	8.01E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.17E+00	NA	NA			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	3.20E-02	0.00E+00	1.60E-01	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.43E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.79E-06	0.00E+00	0.00E+00	5.98E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.03E-04	7.00E-02	8.61E-03	7.00E-01	8.61E-04	0.04%	0.03%
Nickel	0.00E+00	mg/L	1.10E+01	mg/kg	6.83E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	5.96E-02	6.72E-02	6.72E-02	1.01E-01	1.01E-01	0.00E+00	0.00E+00	9.54E-02	0.00E+00	0.00E+00	3.47E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.57E+00	4.00E+01	8.92E-02	8.00E+01	4.46E-02	0.46%	1.75%
Nitrate	9.00E-02	mg/L	9.88E-01	mg/kg	1.86E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	1.98E-02	0.00E+00	2.60E-02	0.00E+00	0.00E+00	2.28E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.74E-01	5.07E+02	5.41E-04	1.13E+03	2.43E-04	0.00%	0.01%
Nitrate/Nitrite	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03								0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.07E+02	0.00E+00	1.13E+03	0.00E+00	0.00%	0.00%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.84E-04	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.56E-06	0.00E+00	0.00E+00	3.01E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.04E-04	4.58E+00	6.64E-05	9.16E+00	3.32E-05	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg				1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	9.03E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.26E-05	0.00E+00	0.00E+00	1.47E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.48E-03	2.40E-01	6.19E-03	2.40E+00	6.19E-04	0.03%	0.02%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	5.32E-01	mg/kg				1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.49E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.49E-01	2.40E-01	3.54E+00	2.40E+00	3.54E-01	18.23%	13.86%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	9.01E-02	mg/kg	1.00E+00			1.14E+00	NA	2.99E+01	2.99E+01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	1.26E-03	0.00E+00	0.00E+00	1.10E-02	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.23E-02	8.50E+00	1.45E-03	2.55E+01	4.82E-04	0.01%	0.02%
Selenium	0.00E+00	mg/L	8.74E-01	mg/kg	3.97E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.19E+00	1.10E+00	4.62E-01	4.62E-01	1.95E-01	1.95E-01	0.00E+00	0.00E+00	5.55E-03	0.00E+00	0.00E+00	5.08E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.63E-02	2.00E-01	2.82E-01	3.30E-01	1.71E-01	1.45%	6.69%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	1.99E-01	0.00E+00	0.00E+00	4.26E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.25E-01	2.63E+02	2.38E-03	7.89E+02	7.92E-04	0.01%	0.03%
Sulfate	5.00E+00	mg/L	3.00E+01	mg/kg	2.06E+03	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	1.10E+00	0.00E+00	2.88E+01	0.00E+00	0.00E+00	2.52E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.82E+02	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.40E-03	0.00E+00	7.40E-02	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.16E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.41E-06	0.00E+00	0.00E+00	5.35E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.39E-04	4.58E+00	1.18E-04	9.16E+00	5.89E-05	0.00%	0.00%
Vanadium	0.00E+00	mg/L	3.08E+01	mg/kg	1.54E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	0.00E+00	0.00E+00	2.15E-01	0.00E+00	0.00E+00	1.45E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.60E-01	2.10E-01	1.71E+00	2.10E+00	1.71E-01	8.83%	6.71%
Zinc	0.00E+00	mg/L	5.15E+01	mg/kg	5.97E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.48E+00	8.57E-01	8.03E-01	8.03E-01	4.51E-01	4.51E-01	0.00E+00	0.00E+00	8.33E-01	0.00E+00	0.00E+00	3.51E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.59E+01	1.60E+02	2.25E-01	3.20E+02	1.12E-01	1.16%	4.40%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.0%	0.0%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	4.9E-04	2.4E-04	0.00%	0.01%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	1.6E-02	3.1E-03	0.1%	0.1%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	4.0E-01	4.0E-02	2.1%	1.6%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.0%	0.0%
Aldrin/Dieldrin/Endrin EEQ:	2.2E-02	2.4E-03	0.1%	0.1%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text tables.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	1	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.000209	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.001611	kg/d
Body weight =	0.015	kg
Home range =	0.074131	acres
Water intake rate =	0.0033	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-138
Tier 2 COPCs
EEQs and Hazard Indices for the Short-tailed Shrew at LHAAP
Low Impact Sub-Area/Saunders Branch Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Total Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							-----	-----	-----	-----Unitless	-----	-----	-----	-----		mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg				7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	0.00E+00	mg/L	6.98E-06	mg/kg	3.18E-06	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	0.00E+00	0.00E+00	4.44E-08	0.00E+00	0.00E+00	3.76E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.81E-06	1.00E-06	3.81E+00	1.00E-05	3.81E-01	41.78%	29.23%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	8.25E-04	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.15E-05	0.00E+00	0.00E+00	7.93E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.05E-04	8.00E-01	1.01E-03	4.00E+00	2.01E-04	0.01%	0.02%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	3.08E-03	mg/kg	1.00E+00		4.75E+00	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	4.31E-05	0.00E+00	0.00E+00	2.98E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.02E-03	8.00E-01	3.78E-03	4.00E+00	7.56E-04	0.04%	0.06%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E-03	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	1.54E-05	0.00E+00	0.00E+00	1.10E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E-03	8.00E-01	1.39E-03	4.00E+00	2.78E-04	0.02%	0.02%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.81E-04	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.53E-06	0.00E+00	0.00E+00	1.80E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E-04	2.00E-01	9.13E-04	1.00E+00	1.83E-04	0.01%	0.01%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.11E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.35E-06	0.00E+00	0.00E+00	3.04E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.08E-04	4.58E+00	6.73E-05	9.16E+00	3.36E-05	0.00%	0.00%
Aluminum	0.00E+00	mg/L	1.18E+04	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.93E+00	0.00E+00	1.93E+01	0.00E+00	0.00%	0.00%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.12E-01	mg/kg				3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.65E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.65E-02	1.25E-01	1.32E-01	1.25E+00	1.32E-02	1.45%	1.01%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.54E-05	0.00E+00	0.00E+00	2.48E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.51E-03	6.85E-02	3.67E-02	6.85E-01	3.67E-03	0.40%	0.28%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.17E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.63E-05	0.00E+00	0.00E+00	1.15E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.16E-03	6.80E-02	1.71E-02	6.80E-01	1.71E-03	0.19%	0.13%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	3.27E-03	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	4.57E-05	0.00E+00	0.00E+00	3.29E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.33E-03	6.80E-02	4.90E-02	6.80E-01	4.90E-03	0.54%	0.38%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	4.04E-03	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	5.64E-05	0.00E+00	0.00E+00	4.26E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.32E-03	6.80E-02	6.35E-02	6.80E-01	6.35E-03	0.70%	0.49%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.43E-04	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.18E-05	0.00E+00	0.00E+00	7.31E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.43E-04	6.80E-02	1.09E-02	6.80E-01	1.09E-03	0.12%	0.08%
Barium	0.00E+00	mg/L	1.24E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E+00	0.00E+00	1.98E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	2.19E-02	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.06E-04	0.00E+00	0.00E+00	1.80E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E-02	4.00E+00	4.58E-03	4.00E+01	4.58E-04	0.05%	0.04%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.27E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	mg/L	1.62E-01	mg/kg	3.19E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	2.80E+01	1.40E+00	1.03E+00	1.03E+00	6.72E-01	6.72E-01	0.00E+00	0.00E+00	4.46E-03	0.00E+00	0.00E+00	9.62E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.66E-01	1.00E+00	9.66E-01	1.00E+01	9.66E-02	10.60%	7.42%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.16E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.01E-06	0.00E+00	0.00E+00	2.10E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.13E-04	4.58E+00	4.66E-05	9.16E+00	2.33E-05	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.09E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	0.00E+00	0.00E+00	1.52E-01	0.00E+00	0.00E+00	3.57E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.09E-01	3.28E+00	1.55E-01	1.31E+01	3.87E-02	1.70%	2.97%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.19E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.06E-06	0.00E+00	0.00E+00	2.14E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.17E-04	4.58E+00	4.74E-05	9.16E+00	2.37E-05	0.00%	0.00%
Copper	0.00E+00	mg/L	8.76E+00	mg/kg	6.48E+00	mg/kg	1.00E+00	1.11E+03	1.56E+00	1.46E+00	5.20E-01	6.25E-01	6.25E-01	8.97E-02	8.97E-02	0.00E+00	0.00E+00	9.05E-02	0.00E+00	0.00E+00	1.02E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E+00	1.17E+01	9.47E-02	1.51E+01	7.32E-02	1.04%	5.62%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.46E-06	0.00E+00	0.00E+00	1.67E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.69E-04	2.00E-02	8.45E-03	2.00E-01	8.45E-04	0.09%	0.06%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.64E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	3.69E-06	0.00E+00	0.00E+00	2.50E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.54E-04	9.20E-02	2.76E-03	9.20E-01	2.76E-04	0.03%	0.02%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.04E-04	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.85E-06	0.00E+00	0.00E+00	1.96E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.99E-04	8.00E-02	2.49E-03	2.90E-01	6.86E-04	0.03%	0.05%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	0.00E+00	mg/L	0.00E+00	mg/kg	9.10E+03	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	0.00E+00	0.00E+00	1.27E+02	0.00E+00	0.00E+00	3.52E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.62E+02	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	2.00E-03	mg/L	0.00E+00	mg/kg	2.03E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	4.57E-01	NA	7.03E-02	7.03E-02	1.16E-02	1.16E-02	4.40E-04	0.00E+00	2.84E-01	0.00E+00	0.00E+00	9.98E-01	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E+00	8.00E+00	1.60E-01	8.00E+01	1.60E-02	1.76%	1.23%
Manganese	0.00E+00	mg/L	3.46E+02	mg/kg	8.30E+02	mg/kg	1.00E+00	2.50E+02	4.20E-01	2.26E-01	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	0.00E+00	0.00E+00	1.16E+01	0.00E+00	0.00E+00	2.01E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.17E+01	8.80E+01	3.61E-01	2.84E+02	1.12E-01	3.96%	8.57%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.07E-02	mg/kg	1.00E+00		1.14E+00	7.97E+00	NA	1.45E+00	1.45E+00	9.15E-02	9.15E-02	0.00E+00	0.00E+00	7.08E-04	0.00E+00	0.00E+00	4.34E-02	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.41E-02	1.32E+01	3.34E-03	3.96E+01	1.11E-03	0.04%	0.09%
Mercury (methyl)	0.00E+00	mg/L	5.78E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	1.37E+00	NA	NA			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	3.20E-02	0.00E+00	1.60E-01	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.87E-04	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.01E-06	0.00E+00	0.00E+00	2.88E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.92E-04	7.00E-02	4.18E-03	7.00E-01	4.18E-04	0.05%	0.03%
Nickel	0.00E+00	mg/L	8.62E+00	mg/kg	6.19E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	6.34E-02	6.89E-02	6.89E-02	8.71E-02	8.71E-02	0.00E+00	0.00E+00	8.64E-02	0.00E+00	0.00E+00	7.04E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.90E-01	4.00E+01	1.98E-02	8.00E+01	9.88E-03	0.22%	0.76%
Nitrate	3.25E-02	mg/L	5.95E-01	mg/kg	1.13E+00	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	7.15E-03	0.00E+00	1.57E-02	0.00E+00	0.00E+00	3.63E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.92E-02	5.07E+02	1.17E-04	1.13E+03	5.24E-05	0.00%	0.00%
Nitrate/Nitrite	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02								0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.07E+02	0.00E+00	1.13E+03	0.00E+00	0.00%	0.00%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E-04	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.38E-06	0.00E+00	0.00E+00	1.62E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.64E-04	4.58E+00	3.58E-05	9.16E+00	1.79E-05	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg				8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.57E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	7.78E-06	0.00E+00	0.00E+00	5.24E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.31E-04	2.40E-01	2.21E-03	2.40E+00	2.21E-04	0.02%	0.02%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	3.80E-01	mg/kg				8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.49E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.49E-01	2.40E-01	1.46E+00	2.40E+00	1.46E-01	15.96%	11.17%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	4.97E-02	mg/kg	1.00E+00			3.00E-01	NA	3.82E+01	3.82E+01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	6.94E-04	0.00E+00	0.00E+00	1.60E-03	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.29E-03	8.50E+00	2.70E-04	2.55E+01	9.00E-05	0.00%	0.01%
Selenium	0.00E+00	mg/L	6.32E-01	mg/kg	3.70E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.21E+00	8.26E-01	4.59E-01	4.59E-01	1.51E-01	1.51E-01	0.00E+00	0.00E+00	5.17E-03	0.00E+00	0.00E+00	4.83E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.34E-02	2.00E-01	2.67E-01	3.30E-01	1.62E-01	2.93%	12.43%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.30E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	1.81E-01	0.00E+00	0.00E+00	1.21E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.03E-01	2.63E+02	1.15E-03	7.89E+02	3.84E-04	0.01%	0.03%
Sulfate	2.88E+00	mg/L	2.58E+01	mg/kg	1.38E+03	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	6.33E-01	0.00E+00	1.92E+01	0.00E+00	0.00E+00	4.44E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.43E+01	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.40E-03	0.00E+00	7.40E-02	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.64E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.68E-06	0.00E+00	0.00E+00	2.57E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.61E-04	4.58E+00	5.70E-05	9.16E+00	2.85E-05	0.00%	0.00%
Vanadium	0.00E+00	mg/L	2.60E+01	mg/kg	1.45E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	0.00E+00	0.00E+00	2.02E-01	0.00E+00	0.00E+00	6.53E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.67E-01	2.10E-01	1.27E+00	2.10E+00	1.27E-01	13.96%	9.77%
Zinc	0.00E+00	mg/L	4.30E+01	mg/kg	4.80E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	6.34E+00	9.28E-01	8.84E-01	8.84E-01	1.84E-01	1.84E-01	0.00E+00	0.00E+00	6.69E-01	0.00E+00	0.00E+00	3.27E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.33E+01	1.60E+02	2.08E-01	3.20E+02	1.04E-01	2.28%	7.99%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.0%	0.0%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	2.5E-04	1.3E-04	0.00%	0.01%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	6.2E-03	1.2E-03	0.1%	0.1%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.8E-01	1.8E-02	1.9%	1.4%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.0%	0.0%
Aldrin/Dieldrin/Endrin EEQ:	1.2E-02	1.3E-03	0.1%	0.1%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi \, x \, Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text tables.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	1	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.000209	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.001611	kg/d
Body weight =	0.015	kg
Home range =	0.963707	acres
Water intake rate =	0.0033	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-139
Tier 1 COPCs
EEQs and Hazard Indices for the Red Fox at LHAAP
Low Impact Sub-Area/Saunders Branch Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Total Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water
									Unitless	Unitless	Unitless	Unitless	Unitless	Unitless		mg/kg-d
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg				1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00
2,3,7,8-TCDD TEQ	0.00E+00	mg/L	6.98E-06	mg/kg	3.95E-06	mg/kg	#######	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	0.00E+00
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.42E-03	mg/kg	#######		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	4.15E-03	mg/kg	#######		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.82E-03	mg/kg	#######		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.04E-04	mg/kg	#######			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.68E-04	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00
Aluminum	0.00E+00	mg/L	1.63E+04	mg/kg	0.00E+00	mg/kg	#######	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	0.00E+00
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.68E-01	mg/kg				1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.04E-03	mg/kg	#######			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.37E-03	mg/kg	#######			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.04E-03	mg/kg	#######		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	6.22E-03	mg/kg	#######			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.97E-04	mg/kg	#######			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00
Barium	0.00E+00	mg/L	1.60E+02	mg/kg	0.00E+00	mg/kg	#######	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	2.50E-02	mg/kg	#######			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	3.06E-01	mg/kg	0.00E+00	mg/kg	#######	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	0.00E+00
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00
Cadmium	0.00E+00	mg/L	2.14E-01	mg/kg	3.95E-01	mg/kg	#######	1.63E+03	7.99E+00	2.55E+01	1.24E+00	9.40E-01	9.40E-01	9.22E-01	9.22E-01	0.00E+00
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.93E-04	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.16E+01	mg/kg	#######	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	0.00E+00
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.52E-04	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00
Copper	0.00E+00	mg/L	1.07E+01	mg/kg	7.35E+00	mg/kg	#######	5.92E+03	5.25E+00	1.33E+00	4.60E-01	5.79E-01	5.79E-01	1.49E-01	1.49E-01	0.00E+00
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.88E-04	mg/kg	#######		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.77E-04	mg/kg	#######			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.36E-04	mg/kg	#######			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00
Iron	0.00E+00	mg/L	0.00E+00	mg/kg	1.01E+04	mg/kg	#######	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	0.00E+00
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00
Lead	3.00E-03	mg/L	0.00E+00	mg/kg	2.30E+01	mg/kg	#######	1.50E+03	6.07E-01	4.47E-01	NA	6.65E-02	6.65E-02	1.33E-02	1.33E-02	2.53E-04
Manganese	0.00E+00	mg/L	4.88E+02	mg/kg	9.62E+02	mg/kg	#######	2.00E+03	2.10E+00	2.20E-01	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	0.00E+00
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.69E-02	mg/kg	#######		2.87E+00	7.38E+00	NA	1.38E+00	1.38E+00	1.03E-01	1.03E-01	0.00E+00
Mercury (methyl)	0.00E+00	mg/L	8.01E-02	mg/kg	0.00E+00	mg/kg	#######		2.87E+00	NA	1.17E+00	NA	NA			0.00E+00
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.43E-04	mg/kg	#######			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00
Nickel	0.00E+00	mg/L	1.10E+01	mg/kg	6.83E+00	mg/kg	#######		2.32E+00	4.73E+00	5.96E-02	6.72E-02	6.72E-02	1.01E-01	1.01E-01	0.00E+00
Nitrate	9.00E-02	mg/L	9.88E-01	mg/kg	1.86E+00	mg/kg	#######	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	7.60E-03
Nitrate/Nitrite	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	1.07E+03								0.00E+00
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.84E-04	mg/kg	#######			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg				1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	9.03E-04	mg/kg	#######			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	5.32E-01	mg/kg				1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	9.01E-02	mg/kg	#######			1.14E+00	NA	2.99E+01	2.99E+01	1.66E-01	1.66E-01	0.00E+00
Selenium	0.00E+00	mg/L	8.74E-01	mg/kg	3.97E-01	mg/kg	#######	2.05E+02	4.50E+00	1.19E+00	1.10E+00	4.62E-01	4.62E-01	1.95E-01	1.95E-01	0.00E+00
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+01	mg/kg	#######		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00
Sulfate	5.00E+00	mg/L	3.00E+01	mg/kg	2.06E+03	mg/kg	#######	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	4.22E-01
Thallium	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	1.59E+04	4.50E+00							0.00E+00
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.16E-04	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00
Vanadium	0.00E+00	mg/L	3.08E+01	mg/kg	1.54E+01	mg/kg	#######	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	0.00E+00
Zinc	0.00E+00	mg/L	5.15E+01	mg/kg	5.97E+01	mg/kg	#######	5.00E+03	7.53E+00	5.48E+00	8.57E-01	8.03E-01	8.03E-01	4.51E-01	4.51E-01	0.00E+00

Chemical	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	0.00E+00	3.74E-09	0.00E+00	0.00E+00	8.90E-08	0.00E+00	7.28E-11	0.00E+00	5.69E-09	1.22E-09	9.97E-08	1.00E-06	9.97E-02	1.00E-05	9.97E-03	20.69%	12.64%
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	1.34E-06	0.00E+00	0.00E+00	2.23E-05	0.00E+00	4.60E-07	0.00E+00	3.86E-05	8.28E-06	7.10E-05	8.00E-01	8.87E-05	4.00E+00	1.77E-05	0.02%	0.02%
4,4'-DDE	0.00E+00	3.93E-06	0.00E+00	0.00E+00	6.55E-05	0.00E+00	1.04E-05	0.00E+00	9.74E-05	2.09E-05	1.98E-04	8.00E-01	2.48E-04	4.00E+00	4.96E-05	0.05%	0.06%
4,4'-DDT	0.00E+00	1.73E-06	0.00E+00	0.00E+00	2.97E-05	0.00E+00	5.91E-07	0.00E+00	7.17E-05	1.54E-05	1.19E-04	8.00E-01	1.49E-04	4.00E+00	2.98E-05	0.03%	0.04%
Aldrin	0.00E+00	1.93E-07	0.00E+00	0.00E+00	3.32E-06	0.00E+00	5.59E-09	0.00E+00	5.55E-06	1.19E-06	1.03E-05	2.00E-01	5.13E-05	1.00E+00	1.03E-05	0.01%	0.01%
alpha-Chlordane	0.00E+00	3.49E-07	0.00E+00	0.00E+00	5.88E-06	0.00E+00	6.02E-08	0.00E+00	1.00E-05	2.15E-06	1.85E-05	4.58E+00	4.03E-06	9.16E+00	2.02E-06	0.00%	0.00%
Aluminum	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.93E+00	0.00E+00	1.93E+01	0.00E+00	0.00%	0.00%
Antimony	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.56E-04	0.00E+00	1.61E-04	0.00E+00	2.23E-03	4.78E-04	3.53E-03	1.25E-01	2.82E-02	1.25E+00	2.82E-03	5.85%	3.58%
Aroclor 1242	0.00E+00	2.88E-06	0.00E+00	0.00E+00	4.87E-05	0.00E+00	2.01E-06	0.00E+00	8.28E-05	1.77E-05	1.54E-04	6.85E-02	2.25E-03	6.85E-01	2.25E-04	0.47%	0.28%
Aroclor 1248	0.00E+00	1.30E-06	0.00E+00	0.00E+00	2.20E-05	0.00E+00	5.62E-08	0.00E+00	3.74E-05	8.01E-06	6.87E-05	6.80E-02	1.01E-03	6.90E-01	9.96E-05	0.21%	0.13%
Aroclor 1254	0.00E+00	3.83E-06	0.00E+00	0.00E+00	6.64E-05	0.00E+00	1.45E-07	0.00E+00	1.01E-04	2.17E-05	1.94E-04	6.80E-02	2.85E-03	6.90E-01	2.80E-04	0.59%	0.36%
Aroclor 1260	0.00E+00	5.90E-06	0.00E+00	0.00E+00	1.08E-04	0.00E+00	1.15E-07	0.00E+00	2.82E-04	6.05E-05	4.56E-04	6.80E-02	6.71E-03	6.90E-01	6.61E-04	1.39%	0.84%
Aroclor 1268	0.00E+00	8.50E-07	0.00E+00	0.00E+00	1.27E-05	0.00E+00	1.91E-06	0.00E+00	2.44E-05	5.24E-06	4.52E-05	6.80E-02	6.64E-04	6.90E-01	6.55E-05	0.14%	0.08%
Barium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E+00	0.00E+00	1.98E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	2.37E-05	0.00E+00	0.00E+00	3.36E-04	0.00E+00	3.26E-04	0.00E+00	6.82E-04	1.46E-04	1.51E-03	4.00E+00	3.78E-04	4.00E+01	3.78E-05	0.08%	0.05%
bis(2-ethylhexyl)phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	3.74E-04	0.00E+00	0.00E+00	1.02E-02	0.00E+00	1.51E-03	0.00E+00	8.62E-03	1.85E-03	2.25E-02	1.00E+00	2.25E-02	1.00E+01	2.25E-03	4.68%	2.86%
Chlordane	0.00E+00	1.83E-07	0.00E+00	0.00E+00	3.08E-06	0.00E+00	3.16E-08	0.00E+00	5.26E-06	1.13E-06	9.69E-06	4.58E+00	2.12E-06	9.16E+00	1.06E-06	0.00%	0.00%
Chromium	0.00E+00	1.10E-02	0.00E+00	0.00E+00	3.72E-02	0.00E+00	2.26E-02	0.00E+00	9.16E-02	1.96E-02	1.82E-01	3.28E+00	5.55E-02	1.31E+01	1.39E-02	11.51%	17.56%
cis-Nonachlor	0.00E+00	2.39E-07	0.00E+00	0.00E+00	4.03E-06	0.00E+00	4.12E-08	0.00E+00	6.87E-06	1.47E-06	1.27E-05	4.58E+00	2.76E-06	9.16E+00	1.38E-06	0.00%	0.00%
Copper	0.00E+00	6.97E-03	0.00E+00	0.00E+00	9.90E-03	0.00E+00	1.72E-02	0.00E+00	2.60E-02	5.57E-03	6.57E-02	1.17E+01	5.61E-03	1.51E+01	4.34E-03	1.16%	5.49%
Dieldrin	0.00E+00	1.79E-07	0.00E+00	0.00E+00	2.92E-06	0.00E+00	1.25E-06	0.00E+00	5.14E-06	1.10E-06	1.06E-05	2.00E-02	5.29E-04	2.00E-01	5.29E-05	0.11%	0.07%
Endrin	0.00E+00	2.62E-07	0.00E+00	0.00E+00	4.29E-06	0.00E+00	4.29E-08	0.00E+00	7.97E-06	1.71E-06	1.43E-05	9.20E-02	1.55E-04	9.20E-01	1.55E-05	0.03%	0.02%
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	2.24E-07	0.00E+00	0.00E+00	3.71E-06	0.00E+00	1.81E-08	0.00E+00	6.43E-06	1.38E-06	1.18E-05	8.00E-02	1.47E-04	2.90E-01	4.06E-05	0.03%	0.05%
HMX	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	0.00E+00	9.53E+00	0.00E+00	0.00E+00	7.95E-01	0.00E+00	1.63E-01	0.00E+00	4.92E-01	1.05E-01	1.11E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	0.00E+00	2.18E-02	0.00E+00	0.00E+00	1.04E-02	NA	6.21E-03	0.00E+00	7.25E-03	1.55E-03	4.75E-02	8.00E+00	5.94E-03	8.00E+01	5.94E-04	1.23%	0.75%
Manganese	0.00E+00	9.12E-01	0.00E+00	0.00E+00	2.14E-01	0.00E+00	3.90E-01	0.00E+00	2.18E-01	4.67E-02	1.78E+00	8.80E+01	2.02E-02	2.84E+02	6.27E-03	4.20%	7.94%
Mercury (inorganic)	0.00E+00	5.39E-05	0.00E+00	0.00E+00	4.25E-04	NA	3.17E-04	0.00E+00	1.38E-04	2.97E-05	9.64E-04	1.00E+00	9.64E-04	3.00E+00	3.21E-04	0.20%	0.41%
Mercury (methyl)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	1.50E-02	0.00E+00	2.50E-02	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	3.25E-07	0.00E+00	0.00E+00	5.64E-06	0.00E+00	4.78E-08	0.00E+00	9.35E-06	2.00E-06	1.74E-05	7.00E-02	2.48E-04	7.00E-01	2.48E-05	0.05%	0.03%
Nickel	0.00E+00	6.47E-03	0.00E+00	0.00E+00	3.27E-02	0.00E+00	1.86E-03	0.00E+00	1.63E-02	3.50E-03	6.09E-02	4.00E+01	1.52E-03	8.00E+01	7.61E-04	0.32%	0.96%
Nitrate	0.00E+00	1.77E-03	0.00E+00	0.00E+00	2.15E-03	0.00E+00	2.64E-03	0.00E+00	7.32E-03	1.57E-03	2.31E-02	5.07E+02	4.55E-05	1.13E+03	2.04E-05	0.01%	0.03%
Nitrate/Nitrite	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.07E+02	0.00E+00	1.13E+03	0.00E+00	0.00%	0.00%
Oxychlordane	0.00E+00	1.74E-07	0.00E+00	0.00E+00	2.84E-06	0.00E+00	1.96E-08	0.00E+00	5.00E-06	1.07E-06	9.11E-06	4.58E+00	1.99E-06	9.16E+00	9.94E-07	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	8.55E-07	0.00E+00	0.00E+00	1.39E-05	0.00E+00	1.22E-07	0.00E+00	2.46E-05	5.27E-06	4.47E-05	2.40E-01	1.86E-04	2.40E+00	1.86E-05	0.04%	0.02%
Pentachlorophenol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.01E-03	0.00E+00	1.52E-04	0.00E+00	1.45E-02	3.11E-03	2.58E-02	2.40E-01	1.07E-01	2.40E+00	1.07E-02	22.26%	13.60%
Perchlorate	0.00E+00	8.54E-05	0.00E+00	0.00E+00	1.04E-04	NA	1.09E-02	0.00E+00	3.54E-04	7.59E-05	1.16E-02	8.50E+00	1.36E-03	2.55E+01	4.53E-04	0.28%	0.57%
Selenium	0.00E+00	3.76E-04	0.00E+00	0.00E+00	4.79E-04	0.00E+00	7.44E-04	0.00E+00	1.83E-03	3.92E-04	3.82E-03	2.00E-01	1.91E-02	3.30E-01	1.16E-02	3.96%	14.67%
Silver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	1.35E-02	0.00E+00	0.00E+00	4.02E-03	0.00E+00	2.02E-02	0.00E+00	5.60E-02	1.20E-02	1.06E-01	2.63E+02	4.02E-04	7.89E+02	1.34E-04	0.08%	0.17%
Sulfate	0.00E+00	1.95E+00	0.00E+00	0.00E+00	2.38E+00	0.00E+00	2.92E+00	0.00E+00	8.09E+00	1.73E+00	1.75E+01	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.40E-03	0.00E+00	7.40E-02	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	2.99E-07	0.00E+00	0.00E+00	5.04E-06	0.00E+00	5.16E-08	0.00E+00	8.61E-06	1.84E-06	1.58E-05	4.58E+00	3.46E-06	9.16E+00	1.73E-06	0.00%	0.00%
Vanadium	0.00E+00	1.46E-02	0.00E+00	0.00E+00	1.37E-03	0.00E+00	2.49E-04	0.00E+00	2.15E-03	4.61E-04	1.88E-02	2.10E-01	8.95E-02	2.10E+00	8.95E-03	18.56%	11.34%
Zinc	0.00E+00	5.65E-02	0.00E+00	0.00E+00	3.31E-01	0.00E+00	1.94E-01	0.00E+00	6.36E-01	1.36E-01	1.35E+00	1.60E+02	8.47E-03	3.20E+02	4.23E-03	1.76%	5.36%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.0%	0.0%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.4E-05	7.2E-06	0.00%	0.01%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	4.9E-04	9.7E-05	0.1%	0.1%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.3E-02	1.3E-03	2.8%	1.7%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.0%	0.0%
Aldrin/Dieldrin/Endrin EEQ:	7.4E-04	7.9E-05	0.2%	0.1%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0.12	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0.03	unitless
Mammal diet fraction =	0.7	unitless
Bird diet fraction =	0.15	unitless
Soil ingestion rate =	0.004263	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.152	kg/d
Body weight =	4.5	kg
Home range =	247.1044	acres
Water intake rate =	0.38	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-140
Tier 2 COPCs
EEQs and Hazard Indices for the Red Fox at LHAAP
Low Impact Sub-Area/Saunders Branch Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Total Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							Unitless	Unitless	Unitless	Unitless	Unitless	Unitless	Unitless	Unitless	Unitless	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg				7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	0.00E+00	mg/L	6.98E-06	mg/kg	3.18E-06	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	0.00E+00	0.00E+00	3.01E-09	0.00E+00	0.00E+00	3.55E-08	0.00E+00	5.00E-11	0.00E+00	3.56E-09	7.62E-10	4.29E-08	1.00E-06	4.29E-02	1.00E-05	4.29E-03	15.41%	9.21%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	8.25E-04	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	7.82E-07	0.00E+00	0.00E+00	7.48E-06	0.00E+00	9.36E-08	0.00E+00	1.71E-05	3.66E-06	2.91E-05	8.00E-01	3.64E-05	4.00E+00	7.28E-06	0.01%	0.02%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	3.08E-03	mg/kg	1.00E+00		4.75E+00	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	2.92E-06	0.00E+00	0.00E+00	2.81E-05	0.00E+00	1.70E-06	0.00E+00	6.87E-05	1.47E-05	1.16E-04	8.00E-01	1.45E-04	4.00E+00	2.90E-05	0.05%	0.06%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E-03	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	1.04E-06	0.00E+00	0.00E+00	1.03E-05	0.00E+00	1.25E-07	0.00E+00	2.31E-05	4.94E-06	3.95E-05	8.00E-01	4.94E-05	4.00E+00	9.88E-06	0.02%	0.02%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.81E-04	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.71E-07	0.00E+00	0.00E+00	1.70E-06	0.00E+00	3.57E-09	0.00E+00	3.75E-06	8.04E-07	6.43E-06	2.00E-01	3.21E-05	1.00E+00	6.43E-06	0.01%	0.01%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.11E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.95E-07	0.00E+00	0.00E+00	2.87E-06	0.00E+00	1.18E-08	0.00E+00	6.45E-06	1.38E-06	1.10E-05	4.58E+00	2.40E-06	9.16E+00	1.20E-06	0.00%	0.00%
Aluminum	0.00E+00	mg/L	1.18E+04	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.93E+00	0.00E+00	1.93E+01	0.00E+00	0.00%	0.00%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.12E-01	mg/kg				3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.56E-04	0.00E+00	7.68E-05	0.00E+00	1.34E-03	2.87E-04	1.86E-03	1.25E-01	1.49E-02	1.25E+00	1.49E-03	5.35%	3.20%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.40E-06	0.00E+00	0.00E+00	2.34E-05	0.00E+00	8.61E-08	0.00E+00	5.25E-05	1.12E-05	8.96E-05	6.85E-02	1.31E-03	6.85E-01	1.31E-04	0.47%	0.28%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.17E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.11E-06	0.00E+00	0.00E+00	1.08E-05	0.00E+00	3.98E-08	0.00E+00	2.43E-05	5.20E-06	4.14E-05	6.80E-02	6.09E-04	6.90E-01	6.00E-05	0.22%	0.13%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	3.27E-03	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	3.10E-06	0.00E+00	0.00E+00	3.10E-05	0.00E+00	4.75E-08	0.00E+00	3.85E-05	8.25E-06	8.09E-05	6.80E-02	1.19E-03	6.90E-01	1.17E-04	0.43%	0.25%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	4.04E-03	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	3.82E-06	0.00E+00	0.00E+00	4.02E-05	0.00E+00	1.05E-08	0.00E+00	1.59E-04	3.42E-05	2.38E-04	6.80E-02	3.49E-03	6.90E-01	3.44E-04	1.26%	0.74%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.43E-04	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	7.99E-07	0.00E+00	0.00E+00	6.90E-06	0.00E+00	1.80E-06	0.00E+00	1.75E-05	3.74E-06	3.07E-05	6.80E-02	4.52E-04	6.90E-01	4.45E-05	0.16%	0.10%
Barium	0.00E+00	mg/L	1.24E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E+00	0.00E+00	1.98E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	2.19E-02	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.08E-05	0.00E+00	0.00E+00	1.70E-04	0.00E+00	2.86E-04	0.00E+00	4.54E-04	9.73E-05	1.03E-03	4.00E+00	2.57E-04	4.00E+01	2.57E-05	0.09%	0.06%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.27E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	mg/L	1.62E-01	mg/kg	3.19E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	2.80E+01	1.40E+00	1.03E+00	1.03E+00	6.72E-01	6.72E-01	0.00E+00	0.00E+00	3.03E-04	0.00E+00	0.00E+00	9.08E-03	0.00E+00	1.34E-03	0.00E+00	5.08E-03	1.09E-03	1.69E-02	1.00E+00	1.69E-02	1.00E+01	1.69E-03	6.07%	3.63%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.16E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.04E-07	0.00E+00	0.00E+00	1.99E-06	0.00E+00	8.15E-09	0.00E+00	4.47E-06	9.57E-07	7.62E-06	4.58E+00	1.66E-06	9.16E+00	8.32E-07	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.09E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	0.00E+00	0.00E+00	1.03E-02	0.00E+00	0.00E+00	3.37E-03	0.00E+00	1.81E-03	0.00E+00	2.17E-02	4.66E-03	4.19E-02	3.28E+00	1.28E-02	1.31E+01	3.19E-03	4.59%	6.85%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.19E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.08E-07	0.00E+00	0.00E+00	2.02E-06	0.00E+00	8.30E-09	0.00E+00	4.55E-06	9.75E-07	7.76E-06	4.58E+00	1.69E-06	9.16E+00	8.47E-07	0.00%	0.00%
Copper	0.00E+00	mg/L	8.76E+00	mg/kg	6.48E+00	mg/kg	1.00E+00	1.11E+03	1.56E+00	1.46E+00	5.20E-01	6.25E-01	6.25E-01	8.97E-02	8.97E-02	0.00E+00	0.00E+00	6.14E-03	0.00E+00	0.00E+00	9.60E-03	0.00E+00	1.64E-02	0.00E+00	1.37E-02	2.95E-03	4.88E-02	1.17E+01	4.18E-03	1.51E+01	3.23E-03	1.50%	6.93%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.67E-07	0.00E+00	0.00E+00	1.57E-06	0.00E+00	1.71E-08	0.00E+00	3.65E-06	7.82E-07	6.19E-06	2.00E-02	3.09E-04	2.00E-01	3.09E-05	0.11%	0.07%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.64E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	2.50E-07	0.00E+00	0.00E+00	2.36E-06	0.00E+00	2.94E-08	0.00E+00	7.59E-06	1.63E-06	1.19E-05	9.20E-02	1.29E-04	9.20E-01	1.29E-05	0.05%	0.03%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.04E-04	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.93E-07	0.00E+00	0.00E+00	1.85E-06	0.00E+00	1.31E-08	0.00E+00	4.23E-06	9.06E-07	7.19E-06	8.00E-02	8.99E-05	2.90E-01	2.48E-05	0.03%	0.05%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	0.00E+00	mg/L	0.00E+00	mg/kg	9.10E+03	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	0.00E+00	0.00E+00	8.62E+00	0.00E+00	0.00E+00	3.32E-01	0.00E+00	1.48E-01	0.00E+00	3.78E-01	8.11E-02	9.56E+00	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	2.00E-03	mg/L	0.00E+00	mg/kg	2.03E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	4.57E-01	NA	7.03E-02	7.03E-02	1.16E-02	1.16E-02	1.69E-04	0.00E+00	1.93E-02	0.00E+00	0.00E+00	9.42E-03	NA	5.79E-03	0.00E+00	5.60E-03	1.20E-03	4.14E-02	8.00E+00	5.18E-03	8.00E+01	5.18E-04	1.86%	1.11%
Manganese	0.00E+00	mg/L	3.46E+02	mg/kg	8.30E+02	mg/kg	1.00E+00	2.50E+02	4.20E-01	2.26E-01	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	0.00E+00	0.00E+00	7.86E-01	0.00E+00	0.00E+00	1.90E-01	0.00E+00	2.66E-01	0.00E+00	1.49E-01	3.19E-02	1.42E+00	8.80E+01	1.62E-02	2.84E+02	5.01E-03	5.81%	10.75%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.07E-02	mg/kg	1.00E+00		1.14E+00	7.97E+00	NA	1.45E+00	1.45E+00	9.15E-02	9.15E-02	0.00E+00	0.00E+00	4.80E-05	0.00E+00	0.00E+00	4.09E-04	NA	2.98E-04	0.00E+00	1.10E-04	2.35E-05	8.89E-04	1.00E+00	8.89E-04	3.00E+00	2.96E-04	0.32%	0.64%
Mercury (methyl)	0.00E+00	mg/L	5.78E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	1.37E+00	NA	NA			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	1.50E-02	0.00E+00	2.50E-02	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.87E-04	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.72E-07	0.00E+00	0.00E+00	2.72E-06	0.00E+00	4.00E-09	0.00E+00	5.95E-06	1.27E-06	1.02E-05	7.00E-02	1.46E-04	7.00E-01	1.46E-05	0.05%	0.03%
Nickel	0.00E+00	mg/L	8.62E+00	mg/kg	6.19E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	6.34E-02	6.89E-02	6.89E-02	8.71E-02	8.71E-02	0.00E+00	0.00E+00	5.86E-03	0.00E+00	0.00E+00	6.64E-03	0.00E+00	1.73E-03	0.00E+00	1.27E-02	2.73E-03	2.97E-02	4.00E+01	7.42E-04	8.00E+01	3.71E-04	0.27%	0.80%
Nitrate	3.25E-02	mg/L	5.95E-01	mg/kg	1.13E+00	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	2.74E-03	0.00E+00	1.07E-03	0.00E+00	0.00E+00	3.43E-04	0.00E+00	9.60E-04	0.00E+00	2.95E-03	6.33E-04	8.70E-03	5.07E+02	1.72E-05	1.13E+03	7.70E-06	0.01%	0.02%
Nitrate/Nitrite	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02								0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.07E+02	0.00E+00	1.13E+03	0.00E+00	0.00%	0.00%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E-04	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.62E-07	0.00E+00	0.00E+00	1.52E-06	0.00E+00	1.82E-08	0.00E+00	3.54E-06	7.58E-07	6.00E-06	4.58E+00	1.31E-06	9.16E+00	6.55E-07	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg				8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.57E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	5.28E-07	0.00E+00	0.00E+00	4.94E-06	0.00E+00	6.19E-08	0.00E+00	1.15E-05	2.47E-06	1.95E-05	2.40E-01	8.14E-05	2.40E+00	8.14E-06	0.03%	0.02%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	3.80E-01	mg/kg				8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.29E-03	0.00E+00	6.55E-05	0.00E+00	7.87E-03	1.69E-03	1.29E-02	2.40E-01	5.38E-02	2.40E+00	5.38E-03	19.33%	11.56%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	4.97E-02	mg/kg	1.00E+00			3.00E-01	NA	3.82E+01	3.82E+01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	4.71E-05	0.00E+00	0.00E+00	1.51E-05	NA	7.70E-03	0.00E+00	1.30E-04	2.79E-05	7.92E-03	8.50E+00	9.32E-04	2.55E+01	3.11E-04	0.33%	0.67%
Selenium	0.00E+00	mg/L	6.32E-01	mg/kg	3.70E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.21E+00	8.26E-01	4.59E-01	4.59E-01	1.51E-01	1.51E-01	0.00E+00	0.00E+00	3.51E-04	0.00E+00	0.00E+00	4.55E-04	0.00E+00	6.89E-04	0.00E+00	1.32E-03	2.83E-04	3.10E-03	2.00E-01	1.55E-02	3.30E-01	9.40E-03	5.57%	20.18%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.30E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	1.23E-02	0.00E+00	0.00E+00	1.15E-03	0.00E+00	1.11E-02	0.00E+00	3.40E-02	7.29E-03	6.58E-02	2.63E+02	2.50E-04	7.89E+02	8.34E-05	0.09%	0.18%
Sulfate	2.88E+00	mg/L	2.58E+01	mg/kg	1.38E+03	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	2.43E-01	0.00E+00	1.30E+00	0.00E+00	0.00E+00	4.19E-01	0.00E+00	1.17E+00	0.00E+00	3.61E+00	7.73E-01	7.52E+00	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.40E-03	0.00E+00	7.40E-02	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.64E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.50E-07	0.00E+00	0.00E+00	2.43E-06	0.00E+00	9.96E-09	0.00E+00	5.46E-06	1.17E-06	9.32E-06	4.58E+00	2.03E-06	9.16E+00	1.02E-06	0.00%	0.00%
Vanadium	0.00E+00	mg/L	2.60E+01	mg/kg	1.45E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	0.00E+00	0.00E+00	1.37E-02	0.00E+00	0.00E+00	6.16E-04	0.00E+00	2.11E-04	0.00E+00	1.88E-03	4.02E-04	1.68E-02	2.10E-01	8.01E-02	2.10E+00	8.01E-03	28.76%	17.19%
Zinc	0.00E+00	mg/L	4.30E+01	mg/kg	4.80E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	6.34E+00	9.28E-01	8.84E-01	8.84E-01	1.84E-01	1.84E-01	0.00E+00	0.00E+00	4.54E-02	0.00E+00	0.00E+00	3.08E-01	0.00E+00	1.72E-01	0.00E+00	2.09E-01	4.47E-02	7.79E-01	1.60E+02	4.87E-03	3.20E+02	2.43E-03	1.75%	5.23%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.0%	0.0%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	9.1E-06	4.6E-06	0.00%	0.01%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	2.3E-04	4.6E-05	0.1%	0.1%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	7.1E-03	7.0E-04	2.5%	1.5%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.0%	0.0%
Aldrin/Dieldrin/Endrin EEQ:	4.7E-04	5.0E-05	0.2%	0.1%

Intake Equation:

$$E_j = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi \times Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text tables.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0.12	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0.03	unitless
Mammal diet fraction =	0.7	unitless
Bird diet fraction =	0.15	unitless
Soil ingestion rate =	0.004263	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.152	kg/d
Body weight =	4.5	kg
Home range =	2565	acres
Water intake rate =	0.38	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-141
Tier 1 COPCs
EEQs and Hazard Indices for the Muskrat at LHAAP
Low Impact Sub-Area/Saunders Branch Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
									---Unitless---						
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg				1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00
2,3,7,8-TCDD TEQ	0.00E+00	mg/L	6.98E-06	mg/kg	3.95E-06	mg/kg	#######	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.40E-03	mg/kg	#######		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	4.30E-03	mg/kg	#######		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.23E-03	mg/kg	#######		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.87E-04	mg/kg	#######			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.76E-04	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Aluminum	0.00E+00	mg/L	1.63E+04	mg/kg	0.00E+00	mg/kg	#######	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	6.37E-01	mg/kg				1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.07E-03	mg/kg	#######			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.42E-03	mg/kg	#######			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.11E-03	mg/kg	#######		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	7.47E-03	mg/kg	#######			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.50E-04	mg/kg	#######			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00
Barium	0.00E+00	mg/L	1.60E+02	mg/kg	0.00E+00	mg/kg	#######	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	6.80E-02	mg/kg	#######			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	3.06E-01	mg/kg	0.00E+00	mg/kg	#######	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00
Cadmium	0.00E+00	mg/L	2.14E-01	mg/kg	3.84E-01	mg/kg	#######	1.63E+03	7.99E+00	2.58E+01	1.24E+00	9.52E-01	1.24E+00	9.22E-01	9.22E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.88E-04	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.22E+01	mg/kg	#######	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-04	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Copper	0.00E+00	mg/L	1.07E+01	mg/kg	7.43E+00	mg/kg	#######	5.92E+03	5.25E+00	1.32E+00	4.60E-01	5.75E-01	4.60E-01	1.49E-01	1.49E-01
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.86E-04	mg/kg	#######		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.75E-04	mg/kg	#######			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.20E-04	mg/kg	#######			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00
Iron	0.00E+00	mg/L	0.00E+00	mg/kg	1.00E+04	mg/kg	#######	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		2.19E+01		1.41E+01	1.41E+01	1.41E+01		
Lead	3.00E-03	mg/L	0.00E+00	mg/kg	2.51E+01	mg/kg	#######	1.50E+03	6.07E-01	4.39E-01	NA	6.40E-02	NA	1.33E-02	1.33E-02
Manganese	0.00E+00	mg/L	4.88E+02	mg/kg	9.35E+02	mg/kg	#######	2.00E+03	2.10E+00	2.21E-01	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.95E-02	mg/kg	#######		2.87E+00	7.16E+00	NA	1.35E+00	NA	1.03E-01	1.03E-01
Mercury (methyl)	0.00E+00	mg/L	8.01E-02	mg/kg	0.00E+00	mg/kg	#######		2.87E+00	NA	1.17E+00	NA	1.17E+00		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.41E-04	mg/kg	#######			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00
Nickel	0.00E+00	mg/L	1.10E+01	mg/kg	7.10E+00	mg/kg	#######		2.32E+00	4.73E+00	5.96E-02	6.65E-02	5.96E-02	1.01E-01	1.01E-01
Nitrate	9.00E-02	mg/L	9.88E-01	mg/kg	0.00E+00	mg/kg	#######	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Nitrate/Nitrite	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	1.07E+03							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	#######			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg				1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	8.83E-04	mg/kg	#######			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	4.23E-01	mg/kg				1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.80E-01	mg/kg	#######			1.14E+00	NA	1.88E+01	1.88E+01	1.66E-01	1.66E-01
Selenium	0.00E+00	mg/L	8.74E-01	mg/kg	4.13E-01	mg/kg	#######	2.05E+02	4.50E+00	1.18E+00	1.06E+00	4.64E-01	5.00E-01	1.95E-01	1.95E-01
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.50E+00		1.70E-01	1.70E-01	1.70E-01		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+01	mg/kg	#######		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Sulfate	5.00E+00	mg/L	3.00E+01	mg/kg	2.30E+02	mg/kg	#######	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Thallium	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	1.59E+04	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.04E-04	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Vanadium	0.00E+00	mg/L	3.08E+01	mg/kg	1.53E+01	mg/kg	#######	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03
Zinc	0.00E+00	mg/L	5.15E+01	mg/kg	5.89E+01	mg/kg	#######	5.00E+03	7.53E+00	5.53E+00	8.57E-01	8.08E-01	8.57E-01	4.51E-01	4.51E-01

Chemical	EED Surface Water (mg/kg-d)	EED Sediment (mg/kg-d)	EED Soil (mg/kg-d)	EED Fish (mg/kg-d)	EED Aq. Invert. (mg/kg-d)	EED Terr. Invert. (mg/kg-d)	EED Aq. Plants (mg/kg-d)	EED Terr. Plants (mg/kg-d)	EED Plant Roots (mg/kg-d)	EED Mammals (mg/kg-d)	EED Birds (mg/kg-d)	Total EED (mg/kg-d)	NOAEL (mg/kg-d)	EEQ N	LOAEL (mg/kg-d)	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	0.00E+00	4.81E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E-09	1.32E-10	1.05E-09	0.00E+00	0.00E+00	5.03E-08	1.00E-06	5.03E-02	1.00E-05	5.03E-03	0.08%	0.07%
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.22E-07	0.00E+00	0.00E+00	0.00E+00	8.22E-07	8.00E-01	1.03E-06	4.00E+00	2.06E-07	0.00%	0.00%
4,4'-DDE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.96E-05	0.00E+00	0.00E+00	0.00E+00	1.96E-05	8.00E-01	2.44E-05	4.00E+00	4.89E-06	0.00%	0.00%
4,4'-DDT	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.31E-06	0.00E+00	0.00E+00	0.00E+00	1.31E-06	8.00E-01	1.64E-06	4.00E+00	3.27E-07	0.00%	0.00%
Aldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.30E-09	0.00E+00	0.00E+00	0.00E+00	9.30E-09	2.00E-01	4.65E-08	1.00E+00	9.30E-09	0.00%	0.00%
alpha-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E-07	0.00E+00	0.00E+00	0.00E+00	1.11E-07	4.58E+00	2.43E-08	9.16E+00	1.21E-08	0.00%	0.00%
Aluminum	0.00E+00	1.12E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.24E+00	0.00E+00	1.24E+00	0.00E+00	0.00E+00	1.15E+02	1.93E+00	5.95E+01	1.93E+01	5.95E+00	93.86%	86.45%
Antimony	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.27E-04	0.00E+00	0.00E+00	0.00E+00	3.27E-04	1.25E-01	2.62E-03	1.25E+00	2.62E-04	0.00%	0.00%
Aroclor 1242	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.67E-06	0.00E+00	0.00E+00	0.00E+00	3.67E-06	6.85E-02	5.36E-05	6.85E-01	5.36E-06	0.00%	0.00%
Aroclor 1248	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E-07	0.00E+00	0.00E+00	0.00E+00	1.05E-07	6.80E-02	1.55E-06	6.80E-01	1.55E-07	0.00%	0.00%
Aroclor 1254	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.67E-07	0.00E+00	0.00E+00	0.00E+00	2.67E-07	6.80E-02	3.92E-06	6.80E-01	3.92E-07	0.00%	0.00%
Aroclor 1260	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.49E-07	0.00E+00	0.00E+00	0.00E+00	2.49E-07	6.80E-02	3.66E-06	6.80E-01	3.66E-07	0.00%	0.00%
Aroclor 1268	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.28E-06	0.00E+00	0.00E+00	0.00E+00	3.28E-06	6.80E-02	4.82E-05	6.80E-01	4.82E-06	0.00%	0.00%
Barium	0.00E+00	1.10E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.86E+00	0.00E+00	4.86E+00	0.00E+00	0.00E+00	1.08E+01	5.10E+00	2.12E+00	1.98E+01	5.47E-01	3.35%	7.95%
Benzoic Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.60E-03	0.00E+00	0.00E+00	0.00E+00	1.60E-03	4.00E+00	4.01E-04	4.00E+01	4.01E-05	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	2.11E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.58E-05	0.00E+00	1.58E-05	0.00E+00	0.00E+00	2.14E-03	1.83E+01	1.17E-04	1.83E+02	1.17E-05	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	1.48E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.75E-03	2.68E-03	8.75E-03	0.00E+00	0.00E+00	2.16E-02	1.00E+00	2.16E-02	1.00E+01	2.16E-03	0.03%	0.03%
Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.55E-08	0.00E+00	0.00E+00	0.00E+00	5.55E-08	4.58E+00	1.21E-08	9.16E+00	6.05E-09	0.00%	0.00%
Chromium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.31E-02	0.00E+00	0.00E+00	0.00E+00	4.31E-02	3.28E+00	1.31E-02	1.31E+01	3.28E-03	0.02%	0.05%
cis-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.32E-08	0.00E+00	0.00E+00	0.00E+00	7.32E-08	4.58E+00	1.60E-08	9.16E+00	7.99E-09	0.00%	0.00%
Copper	0.00E+00	7.39E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.63E-01	3.13E-02	1.63E-01	0.00E+00	0.00E+00	4.30E-01	1.17E+01	3.68E-02	1.51E+01	2.84E-02	0.06%	0.41%
Dieldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.23E-06	0.00E+00	0.00E+00	0.00E+00	2.23E-06	2.00E-02	1.12E-04	2.00E-01	1.12E-05	0.00%	0.00%
Endrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.72E-08	0.00E+00	0.00E+00	0.00E+00	7.72E-08	9.20E-02	8.39E-07	9.20E-01	8.39E-08	0.00%	0.00%
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.05E-08	0.00E+00	0.00E+00	0.00E+00	3.05E-08	8.00E-02	3.81E-07	2.90E-01	1.05E-07	0.00%	0.00%
HMX	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.94E-01	0.00E+00	0.00E+00	0.00E+00	2.94E-01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	2.91E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	1.18E-02	NA	0.00E+00	0.00E+00	1.21E-02	8.00E+00	1.51E-03	8.00E+01	1.51E-04	0.00%	0.00%
Manganese	0.00E+00	3.36E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.61E+00	6.86E-01	1.61E+00	0.00E+00	0.00E+00	7.27E+00	8.80E+01	8.26E-02	2.84E+02	2.56E-02	0.13%	0.37%
Mercury (inorganic)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	5.88E-04	NA	0.00E+00	0.00E+00	5.88E-04	1.32E+01	4.45E-05	3.96E+01	1.48E-05	0.00%	0.00%
Mercury (methyl)	0.00E+00	5.52E-04	0.00E+00	0.00E+00	0.00E+00	NA	3.11E-03	NA	3.11E-03	0.00E+00	0.00E+00	6.76E-03	3.20E-02	2.11E-01	1.60E-01	4.23E-02	0.33%	0.61%
Mirex	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.60E-08	0.00E+00	0.00E+00	0.00E+00	8.60E-08	7.00E-02	1.23E-06	7.00E-01	1.23E-07	0.00%	0.00%
Nickel	0.00E+00	7.61E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.17E-02	3.47E-03	2.17E-02	0.00E+00	0.00E+00	1.23E-01	4.00E+01	3.08E-03	8.00E+01	1.54E-03	0.00%	0.02%
Nitrate	8.74E-03	6.81E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.14E-02	0.00E+00	1.14E-02	0.00E+00	0.00E+00	3.84E-02	5.07E+02	7.57E-05	1.13E+03	3.40E-05	0.00%	0.00%
Nitrate/Nitrite	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.07E+02	0.00E+00	1.13E+03	0.00E+00	0.00%	0.00%
Oxychlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.40E-08	0.00E+00	0.00E+00	0.00E+00	3.40E-08	4.58E+00	7.42E-09	9.16E+00	3.71E-09	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.17E-07	0.00E+00	0.00E+00	0.00E+00	2.17E-07	2.40E-01	9.03E-07	2.40E+00	9.03E-08	0.00%	0.00%
Pentachlorophenol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.19E-04	0.00E+00	0.00E+00	0.00E+00	2.19E-04	2.40E-01	9.11E-04	2.40E+00	9.11E-05	0.00%	0.00%
Perchlorate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	3.86E-02	0.00E+00	0.00E+00	0.00E+00	3.86E-02	8.50E+00	4.54E-03	2.55E+01	1.51E-03	0.01%	0.02%
Selenium	0.00E+00	6.03E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.05E-02	1.40E-03	1.44E-02	0.00E+00	0.00E+00	5.24E-02	2.00E-01	2.62E-01	3.30E-01	1.59E-01	0.41%	2.31%
Silver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.66E-02	0.00E+00	0.00E+00	0.00E+00	3.66E-02	2.63E+02	1.39E-04	7.89E+02	4.64E-05	0.00%	0.00%
Sulfate	4.86E-01	2.07E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.47E-01	5.90E-01	3.47E-01	0.00E+00	0.00E+00	1.98E+00	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.40E-03	0.00E+00	7.40E-02	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.98E-08	0.00E+00	0.00E+00	0.00E+00	8.98E-08	4.58E+00	1.96E-08	9.16E+00	9.80E-09	0.00%	0.00%
Vanadium	0.00E+00	2.12E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.07E-03	4.50E-04	4.07E-03	0.00E+00	0.00E+00	2.21E-01	2.10E-01	1.05E+00	2.10E+00	1.05E-01	1.66%	1.53%
Zinc	0.00E+00	3.55E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.46E+00	3.49E-01	1.46E+00	0.00E+00	0.00E+00	3.62E+00	1.60E+02	2.26E-02	3.20E+02	1.13E-02	0.04%	0.16%

	EEQ N	EEQ L	% EEQ N	% EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.0%	0.0%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	7.9E-08	4.0E-08	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	2.7E-05	5.4E-06	0.0%	0.0%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.1E-04	1.1E-05	0.0%	0.0%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	1.2E-04	1.2E-05	0.0%	0.0%
Aldrin/Dieldrin/Endrin EEQ:	1.1E-04	1.1E-05	0.0%	0.0%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi \times Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0.1	unitless
Aquatic plant diet fraction =	0.45	unitless
Plant root diet fraction =	0.45	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0.008093	kg/d
Food ingestion rate =	0.0861	kg/d
Body weight =	1.174	kg
Home range =	0.11861	acres
Water intake rate =	0.114	L/d
Site Area =	150	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-142
Tier 2 COPCs
EEQs and Hazard Indices for the Muskrat at LHAAP
Low Impact Sub-Area/Saunders Branch Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
									----------Unitless----------						
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg				7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01
2,3,7,8-TCDD TEQ	0.00E+00	mg/L	6.98E-06	mg/kg	3.18E-06	mg/kg	#######	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	8.00E-04	mg/kg	#######		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	3.10E-03	mg/kg	#######		4.75E+00	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.07E-03	mg/kg	#######		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	#######			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.15E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Aluminum	0.00E+00	mg/L	1.18E+04	mg/kg	0.00E+00	mg/kg	#######	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-01	mg/kg				3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.55E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.21E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	3.32E-03	mg/kg	#######		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	4.07E-03	mg/kg	#######			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	7.92E-04	mg/kg	#######			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01
Barium	0.00E+00	mg/L	1.24E+02	mg/kg	0.00E+00	mg/kg	#######	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	5.10E-02	mg/kg	#######			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.27E-01	mg/kg	0.00E+00	mg/kg	#######	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01
Cadmium	0.00E+00	mg/L	1.62E-01	mg/kg	3.02E-01	mg/kg	#######	1.15E+03	6.00E-01	2.87E+01	1.40E+00	1.06E+00	1.40E+00	6.72E-01	6.72E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E+01	mg/kg	#######	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Copper	0.00E+00	mg/L	8.76E+00	mg/kg	6.53E+00	mg/kg	#######	1.11E+03	1.56E+00	1.45E+00	5.20E-01	6.22E-01	5.20E-01	8.97E-02	8.97E-02
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.72E-04	mg/kg	#######		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-04	mg/kg	#######			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.93E-04	mg/kg	#######			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01
Iron	0.00E+00	mg/L	0.00E+00	mg/kg	9.10E+03	mg/kg	#######	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.67E+00		1.39E+01	1.39E+01	1.39E+01		
Lead	2.00E-03	mg/L	0.00E+00	mg/kg	2.21E+01	mg/kg	#######	4.48E+02	7.10E-02	4.50E-01	NA	6.78E-02	NA	1.16E-02	1.16E-02
Manganese	0.00E+00	mg/L	3.46E+02	mg/kg	8.30E+02	mg/kg	#######	2.50E+02	4.20E-01	2.26E-01	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-02	mg/kg	#######		1.14E+00	7.64E+00	NA	1.41E+00	NA	9.15E-02	9.15E-02
Mercury (methyl)	0.00E+00	mg/L	5.78E-02	mg/kg	0.00E+00	mg/kg	#######		1.14E+00	NA	1.37E+00	NA	1.37E+00		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.88E-04	mg/kg	#######			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01
Nickel	0.00E+00	mg/L	8.62E+00	mg/kg	6.36E+00	mg/kg	#######		4.86E-01	1.06E+00	6.34E-02	6.84E-02	6.34E-02	8.71E-02	8.71E-02
Nitrate	3.25E-02	mg/L	5.95E-01	mg/kg	0.00E+00	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Nitrate/Nitrite	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	3.01E+02							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E-04	mg/kg	#######			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg				8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.62E-04	mg/kg	#######			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-01	mg/kg				8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	7.70E-02	mg/kg	#######			3.00E-01	NA	3.19E+01	3.19E+01	1.11E-01	1.11E-01
Selenium	0.00E+00	mg/L	6.32E-01	mg/kg	3.74E-01	mg/kg	#######	2.05E+02	4.50E+00	1.21E+00	8.19E-01	4.59E-01	4.84E-01	1.51E-01	1.51E-01
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.50E+00		1.40E-02	1.40E-02	1.40E-02		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.30E+01	mg/kg	#######		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Sulfate	2.88E+00	mg/L	2.58E+01	mg/kg	1.30E+02	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Thallium	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	7.50E+01	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Vanadium	0.00E+00	mg/L	2.60E+01	mg/kg	1.45E+01	mg/kg	#######	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03
Zinc	0.00E+00	mg/L	4.30E+01	mg/kg	4.79E+01	mg/kg	#######	2.91E+03	1.94E+00	6.34E+00	9.28E-01	8.84E-01	9.28E-01	1.84E-01	1.84E-01

Chemical	EED Surface Water (mg/kg-d)	EED Sediment (mg/kg-d)	EED Soil (mg/kg-d)	EED Fish (mg/kg-d)	EED Aq. Invert. (mg/kg-d)	EED Terr. Invert. (mg/kg-d)	EED Aq. Plants (mg/kg-d)	EED Terr. Plants (mg/kg-d)	EED Plant Roots (mg/kg-d)	EED Mammals (mg/kg-d)	EED Birds (mg/kg-d)	Total EED (mg/kg-d)	NOAEL (mg/kg-d)	EEQ N	LOAEL (mg/kg-d)	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	0.00E+00	4.81E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.93E-10	9.04E-11	8.93E-10	0.00E+00	0.00E+00	5.00E-08	1.00E-06	5.00E-02	1.00E-05	5.00E-03	0.11%	0.11%
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.64E-07	0.00E+00	0.00E+00	0.00E+00	1.64E-07	8.00E-01	2.05E-07	4.00E+00	4.11E-08	0.00%	0.00%
4,4'-DDE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.09E-06	0.00E+00	0.00E+00	0.00E+00	3.09E-06	8.00E-01	3.87E-06	4.00E+00	7.73E-07	0.00%	0.00%
4,4'-DDT	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.19E-07	0.00E+00	0.00E+00	0.00E+00	2.19E-07	8.00E-01	2.74E-07	4.00E+00	5.48E-08	0.00%	0.00%
Aldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.27E-09	0.00E+00	0.00E+00	0.00E+00	6.27E-09	2.00E-01	3.14E-08	1.00E+00	6.27E-09	0.00%	0.00%
alpha-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.16E-08	0.00E+00	0.00E+00	0.00E+00	2.16E-08	4.58E+00	4.71E-09	9.16E+00	2.35E-09	0.00%	0.00%
Aluminum	0.00E+00	8.15E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.85E-01	0.00E+00	5.85E-01	0.00E+00	0.00E+00	8.27E+01	1.93E+00	4.28E+01	1.93E+01	4.28E+00	95.91%	91.61%
Antimony	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.38E-04	0.00E+00	0.00E+00	0.00E+00	1.38E-04	1.25E-01	1.11E-03	1.25E+00	1.11E-04	0.00%	0.00%
Aroclor 1242	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.57E-07	0.00E+00	0.00E+00	0.00E+00	1.57E-07	6.85E-02	2.29E-06	6.85E-01	2.29E-07	0.00%	0.00%
Aroclor 1248	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.43E-08	0.00E+00	0.00E+00	0.00E+00	7.43E-08	6.80E-02	1.09E-06	6.80E-01	1.09E-07	0.00%	0.00%
Aroclor 1254	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.70E-08	0.00E+00	0.00E+00	0.00E+00	8.70E-08	6.80E-02	1.28E-06	6.80E-01	1.28E-07	0.00%	0.00%
Aroclor 1260	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.92E-08	0.00E+00	0.00E+00	0.00E+00	1.92E-08	6.80E-02	2.82E-07	6.80E-01	2.82E-08	0.00%	0.00%
Aroclor 1268	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.06E-06	0.00E+00	0.00E+00	0.00E+00	3.06E-06	6.80E-02	4.50E-05	6.80E-01	4.50E-06	0.00%	0.00%
Barium	0.00E+00	8.54E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.38E-01	0.00E+00	6.38E-01	0.00E+00	0.00E+00	2.13E+00	5.10E+00	4.18E-01	1.98E+01	1.08E-01	0.94%	2.30%
Benzoic Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E-03	0.00E+00	0.00E+00	0.00E+00	1.20E-03	4.00E+00	3.01E-04	4.00E+01	3.01E-05	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	1.56E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.10E-06	0.00E+00	4.10E-06	0.00E+00	0.00E+00	1.57E-03	1.83E+01	8.58E-05	1.83E+02	8.59E-06	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	1.12E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.50E-03	2.35E-03	7.50E-03	0.00E+00	0.00E+00	1.85E-02	1.00E+00	1.85E-02	1.00E+01	1.85E-03	0.04%	0.04%
Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.18E-08	0.00E+00	0.00E+00	0.00E+00	1.18E-08	4.58E+00	2.58E-09	9.16E+00	1.29E-09	0.00%	0.00%
Chromium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.31E-03	0.00E+00	0.00E+00	0.00E+00	3.31E-03	3.28E+00	1.01E-03	1.31E+01	2.52E-04	0.00%	0.01%
cis-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.45E-08	0.00E+00	0.00E+00	0.00E+00	1.45E-08	4.58E+00	3.17E-09	9.16E+00	1.58E-09	0.00%	0.00%
Copper	0.00E+00	6.04E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.50E-01	2.98E-02	1.50E-01	0.00E+00	0.00E+00	3.91E-01	1.17E+01	3.34E-02	1.51E+01	2.58E-02	0.07%	0.55%
Dieldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.03E-08	0.00E+00	0.00E+00	0.00E+00	3.03E-08	2.00E-02	1.51E-06	2.00E-01	1.51E-07	0.00%	0.00%
Endrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.78E-08	0.00E+00	0.00E+00	0.00E+00	4.78E-08	9.20E-02	5.20E-07	9.20E-01	5.20E-08	0.00%	0.00%
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.25E-08	0.00E+00	0.00E+00	0.00E+00	2.25E-08	8.00E-02	2.81E-07	2.90E-01	7.76E-08	0.00%	0.00%
HMX	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.67E-01	0.00E+00	0.00E+00	0.00E+00	2.67E-01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	1.94E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	1.10E-02	NA	0.00E+00	0.00E+00	1.12E-02	8.00E+00	1.40E-03	8.00E+01	1.40E-04	0.00%	0.00%
Manganese	0.00E+00	2.39E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.03E-01	4.81E-01	9.03E-01	0.00E+00	0.00E+00	4.67E+00	8.80E+01	5.31E-02	2.84E+02	1.65E-02	0.12%	0.35%
Mercury (inorganic)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	5.58E-04	NA	0.00E+00	0.00E+00	5.58E-04	1.32E+01	4.23E-05	3.96E+01	1.41E-05	0.00%	0.00%
Mercury (methyl)	0.00E+00	3.99E-04	0.00E+00	0.00E+00	0.00E+00	NA	2.60E-03	NA	2.60E-03	0.00E+00	0.00E+00	5.61E-03	3.20E-02	1.75E-01	1.60E-01	3.51E-02	0.39%	0.75%
Mirex	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.27E-09	0.00E+00	0.00E+00	0.00E+00	7.27E-09	7.00E-02	1.04E-07	7.00E-01	1.04E-08	0.00%	0.00%
Nickel	0.00E+00	5.94E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-02	3.19E-03	1.80E-02	0.00E+00	0.00E+00	9.87E-02	4.00E+01	2.47E-03	8.00E+01	1.23E-03	0.01%	0.03%
Nitrate	3.16E-03	4.10E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.12E-03	0.00E+00	4.12E-03	0.00E+00	0.00E+00	1.55E-02	5.07E+02	3.06E-05	1.13E+03	1.37E-05	0.00%	0.00%
Nitrate/Nitrite	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.07E+02	0.00E+00	1.13E+03	0.00E+00	0.00%	0.00%
Oxychlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.30E-08	0.00E+00	0.00E+00	0.00E+00	3.30E-08	4.58E+00	7.19E-09	9.16E+00	3.60E-09	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-07	0.00E+00	0.00E+00	0.00E+00	1.13E-07	2.40E-01	4.71E-07	2.40E+00	4.71E-08	0.00%	0.00%
Pentachlorophenol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.72E-05	0.00E+00	0.00E+00	0.00E+00	7.72E-05	2.40E-01	3.22E-04	2.40E+00	3.22E-05	0.00%	0.00%
Perchlorate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	1.80E-02	0.00E+00	0.00E+00	0.00E+00	1.80E-02	8.50E+00	2.12E-03	2.55E+01	7.07E-04	0.00%	0.02%
Selenium	0.00E+00	4.36E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.71E-02	1.26E-03	1.01E-02	0.00E+00	0.00E+00	3.28E-02	2.00E-01	1.64E-01	3.30E-01	9.94E-02	0.37%	2.13%
Silver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-02	0.00E+00	0.00E+00	0.00E+00	2.00E-02	2.63E+02	7.61E-05	7.89E+02	2.54E-05	0.00%	0.00%
Sulfate	2.79E-01	1.78E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.79E-01	2.00E-01	1.79E-01	0.00E+00	0.00E+00	1.02E+00	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.40E-03	0.00E+00	7.40E-02	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.73E-08	0.00E+00	0.00E+00	0.00E+00	1.73E-08	4.58E+00	3.77E-09	9.16E+00	1.89E-09	0.00%	0.00%
Vanadium	0.00E+00	1.79E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.09E-03	3.82E-04	3.09E-03	0.00E+00	0.00E+00	1.86E-01	2.10E-01	8.84E-01	2.10E+00	8.84E-02	1.98%	1.89%
Zinc	0.00E+00	2.96E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.32E+00	3.11E-01	1.32E+00	0.00E+00	0.00E+00	3.24E+00	1.60E+02	2.02E-02	3.20E+02	1.01E-02	0.05%	0.22%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.0%	0.0%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	2.1E-08	1.1E-08	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	4.3E-06	8.7E-07	0.0%	0.0%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	5.0E-05	5.0E-06	0.0%	0.0%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	8.6E-05	8.6E-06	0.0%	0.0%
Aldrin/Dieldrin/Endrin EEQ:	2.1E-06	2.1E-07	0.0%	0.0%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0.1	unitless
Aquatic plant diet fraction =	0.45	unitless
Plant root diet fraction =	0.45	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0.008093	kg/d
Food ingestion rate =	0.0861	kg/d
Body weight =	1.174	kg
Home range =	0.33112	acres
Water intake rate =	0.114	L/d
Site Area =	150	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-143
Tier 1 COPCs
EEQs and Hazard Indices for the River Otter at LHAAP
Low Impact Sub-Area/Saunders Branch Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							Unitless									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg				1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	0.00E+00	mg/L	6.98E-06	mg/kg	3.95E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	0.00E+00	8.87E-10	0.00E+00	0.00E+00	7.47E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E-10	7.57E-08	1.00E-06	7.57E-02	1.00E-05	7.57E-03	0.38%	0.37%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.40E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.89E-07	7.89E-07	8.00E-01	9.86E-07	4.00E+00	1.97E-07	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	4.30E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.09E-06	2.09E-06	8.00E-01	2.61E-06	4.00E+00	5.22E-07	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.23E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.81E-06	1.81E-06	8.00E-01	2.26E-06	4.00E+00	4.53E-07	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.87E-04	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E-07	1.05E-07	2.00E-01	5.27E-07	1.00E+00	1.05E-07	0.00%	0.00%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.76E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.12E-07	2.12E-07	4.58E+00	4.63E-08	9.16E+00	2.31E-08	0.00%	0.00%
Aluminum	0.00E+00	mg/L	1.63E+04	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	0.00E+00	2.07E-01	0.00E+00	0.00E+00	3.58E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.79E+01	1.93E+00	1.96E+01	1.93E+01	1.96E+00	98.21%	96.99%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	6.37E-01	mg/kg				1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.17E-05	5.17E-05	1.25E-01	4.14E-04	1.25E+00	4.14E-05	0.00%	0.00%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.07E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.73E-06	1.73E-06	6.85E-02	2.52E-05	6.85E-01	2.52E-06	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.42E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.99E-07	7.99E-07	6.80E-02	1.18E-05	6.90E-01	1.16E-06	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.11E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.13E-06	2.13E-06	6.80E-02	3.14E-05	6.90E-01	3.09E-06	0.00%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	7.47E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-06	7.00E-06	6.80E-02	1.03E-04	6.90E-01	1.01E-05	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.50E-04	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.79E-07	4.79E-07	6.80E-02	7.04E-06	6.90E-01	6.94E-07	0.00%	0.00%
Barium	0.00E+00	mg/L	1.60E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	2.04E-02	0.00E+00	0.00E+00	3.52E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.73E-01	5.10E+00	7.31E-02	1.98E+01	1.88E-02	0.37%	0.93%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	6.80E-02	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.83E-05	3.83E-05	4.00E+00	9.57E-06	4.00E+01	9.57E-07	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	3.06E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	0.00E+00	3.89E-05	0.00E+00	0.00E+00	3.27E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.31E-03	1.83E+01	1.81E-04	1.83E+02	1.81E-05	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	mg/L	2.14E-01	mg/kg	3.84E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.58E+01	1.24E+00	9.52E-01	9.52E-01	9.22E-01	9.22E-01	0.00E+00	2.72E-05	0.00E+00	0.00E+00	8.36E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.73E-04	1.04E-03	1.00E+00	1.04E-03	1.00E+01	1.04E-04	0.01%	0.01%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.88E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.06E-07	1.06E-07	4.58E+00	2.31E-08	9.16E+00	1.15E-08	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.22E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.99E-03	1.99E-03	3.28E+00	6.08E-04	1.31E+01	1.52E-04	0.00%	0.01%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.39E-07	1.39E-07	4.58E+00	3.04E-08	9.16E+00	1.52E-08	0.00%	0.00%
Copper	0.00E+00	mg/L	1.07E+01	mg/kg	7.43E+00	mg/kg	1.00E+00	5.92E+03	5.25E+00	1.32E+00	4.60E-01	5.75E-01	5.75E-01	1.49E-01	1.49E-01	0.00E+00	1.36E-03	0.00E+00	0.00E+00	2.75E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.43E-04	2.94E-02	1.17E+01	2.51E-03	1.51E+01	1.94E-03	0.01%	0.10%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.86E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E-07	1.05E-07	2.00E-02	5.23E-06	2.00E-01	5.23E-07	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.75E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.64E-07	1.64E-07	9.20E-02	1.78E-06	9.20E-01	1.78E-07	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.20E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.24E-07	1.24E-07	8.00E-02	1.55E-06	2.90E-01	4.28E-07	0.00%	0.00%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	0.00E+00	mg/L	0.00E+00	mg/kg	1.00E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.01E-02	1.01E-02	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	3.00E-03	mg/L	0.00E+00	mg/kg	2.51E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	4.39E-01	NA	6.40E-02	6.40E-02	1.33E-02	1.33E-02	5.00E-05	0.00E+00	0.00E+00	3.96E-02	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	1.63E-04	3.98E-02	8.00E+00	4.97E-03	8.00E+01	4.97E-04	0.02%	0.02%
Manganese	0.00E+00	mg/L	4.88E+02	mg/kg	9.35E+02	mg/kg	1.00E+00	2.00E+03	2.10E+00	2.21E-01	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	0.00E+00	6.20E-02	0.00E+00	0.00E+00	5.01E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.38E-03	5.67E-01	8.80E+01	6.45E-03	2.84E+02	2.00E-03	0.03%	0.10%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.95E-02	mg/kg	1.00E+00		2.87E+00	7.16E+00	NA	1.35E+00	1.35E+00	1.03E-01	1.03E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	3.00E-06	3.00E-06	1.00E+00	3.00E-06	3.00E+00	9.98E-07	0.00%	0.00%
Mercury (methyl)	0.00E+00	mg/L	8.01E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.17E+00	NA	NA			0.00E+00	1.02E-05	0.00E+00	0.00E+00	1.12E-04	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	1.22E-04	1.50E-02	8.16E-03	2.50E-02	4.90E-03	0.04%	0.24%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.41E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.92E-07	1.92E-07	7.00E-02	2.75E-06	7.00E-01	2.75E-07	0.00%	0.00%
Nickel	0.00E+00	mg/L	1.10E+01	mg/kg	7.10E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	5.96E-02	6.65E-02	6.65E-02	1.01E-01	1.01E-01	0.00E+00	1.40E-03	0.00E+00	0.00E+00	1.25E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.51E-04	1.43E-02	4.00E+01	3.57E-04	8.00E+01	1.78E-04	0.00%	0.01%
Nitrate	9.00E-02	mg/L	9.88E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	1.50E-03	1.26E-04	0.00E+00	8.45E-01	1.01E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.48E-01	5.07E+02	1.67E-03	1.13E+03	7.50E-04	0.01%	0.04%
Nitrate/Nitrite	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03								0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.07E+02	0.00E+00	1.13E+03	0.00E+00	0.00%	0.00%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.90E-08	9.90E-08	4.58E+00	2.16E-08	9.16E+00	1.08E-08	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg				1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	8.83E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.97E-07	4.97E-07	2.40E-01	2.07E-06	2.40E+00	2.07E-07	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	4.23E-01	mg/kg				1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.38E-04	2.38E-04	2.40E-01	9.92E-04	2.40E+00	9.92E-05	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.80E-01	mg/kg	1.00E+00			1.14E+00	NA	1.88E+01	1.88E+01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	2.27E-05	2.27E-05	8.50E+00	2.68E-06	2.55E+01	8.92E-07	0.00%	0.00%
Selenium	0.00E+00	mg/L	8.74E-01	mg/kg	4.13E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.18E+00	1.06E+00	4.64E-01	4.64E-01	1.95E-01	1.95E-01	0.00E+00	1.11E-04	0.00E+00	0.00E+00	1.92E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.93E-05	2.07E-03	2.00E-01	1.04E-02	3.30E-01	6.28E-03	0.05%	0.31%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.16E-03	1.16E-03	2.63E+02	4.41E-06	7.89E+02	1.47E-06	0.00%	0.00%
Sulfate	5.00E+00	mg/L	3.00E+01	mg/kg	2.30E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	8.33E-02	3.81E-03	0.00E+00	4.70E+01	3.08E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.87E-02	4.71E+01	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.40E-03	0.00E+00	7.40E-02	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.04E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.71E-07	1.71E-07	4.58E+00	3.73E-08	9.16E+00	1.87E-08	0.00%	0.00%
Vanadium	0.00E+00	mg/L	3.08E+01	mg/kg	1.53E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	0.00E+00	3.91E-03	0.00E+00	0.00E+00	3.16E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.44E-05	3.56E-02	2.10E-01	1.69E-01	2.10E+00	1.69E-02	0.85%	0.84%
Zinc	0.00E+00	mg/L	5.15E+01	mg/kg	5.89E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.53E+00	8.57E-01	8.08E-01	8.08E-01	4.51E-01	4.51E-01	0.00E+00	6.54E-03	0.00E+00	0.00E+00	1.89E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E-02	2.09E-01	1.60E+02	1.30E-03	3.20E+02	6.52E-04	0.01%	0.03%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.0%	0.0%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.6E-07	7.9E-08	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	5.9E-06	1.2E-06	0.0%	0.0%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.8E-04	1.8E-05	0.0%	0.0%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	1.8E-04	1.8E-05	0.0%	0.0%
Aldrin/Dieldrin/Endrin EEQ:	7.5E-06	8.1E-07	0.0%	0.0%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\,x\,Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.9	unitless
Aq. Invert diet fraction =	0.05	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0.05	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0.00494	kg/d
Food ingestion rate =	0.38	kg/d
Body weight =	8	kg
Home range =	729	acres
Water intake rate =	0.648	L/d
Site Area =	150	acres
Area Use Factor (AUF) =	0.205761	unitless
Exposure Duration (ED) =	1	unitless

Table E-144
Tier 2 COPCs
EEQs and Hazard Indices for the River Otter at LHAAP
Low Impact Sub-Area/Saunders Branch Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
									----Unitless----							mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg				7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	0.00E+00	mg/L	6.98E-06	mg/kg	3.18E-06	mg/kg	#######	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	0.00E+00	6.54E-10	0.00E+00	0.00E+00	1.18E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.43E-11	1.25E-08	1.00E-06	1.25E-02	1.00E-05	1.25E-03	0.12%	0.12%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	8.00E-04	mg/kg	#######		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.53E-07	2.53E-07	8.00E-01	3.16E-07	4.00E+00	6.32E-08	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	3.10E-03	mg/kg	#######		4.75E+00	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E-06	1.05E-06	8.00E-01	1.32E-06	4.00E+00	2.63E-07	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.07E-03	mg/kg	#######		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.42E-07	3.42E-07	8.00E-01	4.27E-07	4.00E+00	8.54E-08	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	#######			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.56E-08	5.56E-08	2.00E-01	2.78E-07	1.00E+00	5.56E-08	0.00%	0.00%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.15E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.96E-08	9.96E-08	4.58E+00	2.17E-08	9.16E+00	1.09E-08	0.00%	0.00%
Aluminum	0.00E+00	mg/L	1.18E+04	mg/kg	0.00E+00	mg/kg	#######	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	0.00E+00	1.11E+00	0.00E+00	0.00E+00	1.92E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.03E+01	1.93E+00	1.05E+01	1.93E+01	1.05E+00	99.10%	98.08%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-01	mg/kg				3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.03E-05	2.03E-05	1.25E-01	1.63E-04	1.25E+00	1.63E-05	0.00%	0.00%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.55E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.06E-07	8.06E-07	6.85E-02	1.18E-05	6.85E-01	1.18E-06	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.21E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.82E-07	3.82E-07	6.80E-02	5.62E-06	6.90E-01	5.53E-07	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	3.32E-03	mg/kg	#######		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.95E-07	5.95E-07	6.80E-02	8.75E-06	6.90E-01	8.63E-07	0.00%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	4.07E-03	mg/kg	#######			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.45E-06	2.45E-06	6.80E-02	3.61E-05	6.90E-01	3.55E-06	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	7.92E-04	mg/kg	#######			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-07	2.50E-07	6.80E-02	3.68E-06	6.90E-01	3.63E-07	0.00%	0.00%
Barium	0.00E+00	mg/L	1.24E+02	mg/kg	0.00E+00	mg/kg	#######	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	1.16E-02	0.00E+00	0.00E+00	2.01E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.13E-01	5.10E+00	4.17E-02	1.98E+01	1.07E-02	0.39%	1.00%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	5.10E-02	mg/kg	#######			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.61E-05	1.61E-05	4.00E+00	4.03E-06	4.00E+01	4.03E-07	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.27E-01	mg/kg	0.00E+00	mg/kg	#######	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	0.00E+00	2.13E-05	0.00E+00	0.00E+00	3.82E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.03E-04	1.83E+01	2.20E-05	1.83E+02	2.20E-06	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	mg/L	1.62E-01	mg/kg	3.02E-01	mg/kg	#######	1.15E+03	6.00E-01	2.87E+01	1.40E+00	1.06E+00	1.06E+00	6.72E-01	6.72E-01	0.00E+00	1.52E-05	0.00E+00	0.00E+00	3.50E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.33E-05	1.24E-04	1.00E+00	1.24E-04	1.00E+01	1.24E-05	0.00%	0.00%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.47E-08	5.47E-08	4.58E+00	1.19E-08	9.16E+00	5.97E-09	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E+01	mg/kg	#######	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.36E-04	3.36E-04	3.28E+00	1.03E-04	1.31E+01	2.56E-05	0.00%	0.00%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.70E-08	6.70E-08	4.58E+00	1.46E-08	9.16E+00	7.31E-09	0.00%	0.00%
Copper	0.00E+00	mg/L	8.76E+00	mg/kg	6.53E+00	mg/kg	#######	1.11E+03	1.56E+00	1.45E+00	5.20E-01	6.22E-01	6.22E-01	8.97E-02	8.97E-02	0.00E+00	8.21E-04	0.00E+00	0.00E+00	4.93E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.11E-04	5.96E-03	1.17E+01	5.09E-04	1.51E+01	3.94E-04	0.00%	0.04%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.72E-04	mg/kg	#######		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.43E-08	5.43E-08	2.00E-02	2.72E-06	2.00E-01	2.72E-07	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-04	mg/kg	#######			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.04E-07	1.04E-07	9.20E-02	1.13E-06	9.20E-01	1.13E-07	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.93E-04	mg/kg	#######			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.10E-08	6.10E-08	8.00E-02	7.63E-07	2.90E-01	2.10E-07	0.00%	0.00%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	0.00E+00	mg/L	0.00E+00	mg/kg	9.10E+03	mg/kg	#######	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.77E-03	5.77E-03	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	2.00E-03	mg/L	0.00E+00	mg/kg	2.21E+01	mg/kg	#######	4.48E+02	7.10E-02	4.50E-01	NA	6.78E-02	6.78E-02	1.16E-02	1.16E-02	2.46E-05	0.00E+00	0.00E+00	5.82E-03	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	9.27E-05	5.93E-03	8.00E+00	7.42E-04	8.00E+01	7.42E-05	0.01%	0.01%
Manganese	0.00E+00	mg/L	3.46E+02	mg/kg	8.30E+02	mg/kg	#######	2.50E+02	4.20E-01	2.26E-01	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	0.00E+00	3.25E-02	0.00E+00	0.00E+00	5.24E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.27E-03	8.72E-02	8.80E+01	9.91E-04	2.84E+02	3.07E-04	0.01%	0.03%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-02	mg/kg	#######		1.14E+00	7.64E+00	NA	1.41E+00	1.41E+00	9.15E-02	9.15E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	1.78E-06	1.78E-06	1.00E+00	1.78E-06	3.00E+00	5.94E-07	0.00%	0.00%
Mercury (methyl)	0.00E+00	mg/L	5.78E-02	mg/kg	0.00E+00	mg/kg	#######		1.14E+00	NA	1.37E+00	NA	NA			0.00E+00	5.42E-06	0.00E+00	0.00E+00	2.37E-05	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	2.91E-05	1.50E-02	1.94E-03	2.50E-02	1.16E-03	0.02%	0.11%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.88E-04	mg/kg	#######			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.12E-08	9.12E-08	7.00E-02	1.30E-06	7.00E-01	1.30E-07	0.00%	0.00%
Nickel	0.00E+00	mg/L	8.62E+00	mg/kg	6.36E+00	mg/kg	#######		4.86E-01	1.06E+00	6.34E-02	6.84E-02	6.84E-02	8.71E-02	8.71E-02	0.00E+00	8.08E-04	0.00E+00	0.00E+00	1.51E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-04	2.52E-03	4.00E+01	6.30E-05	8.00E+01	3.15E-05	0.00%	0.00%
Nitrate	3.25E-02	mg/L	5.95E-01	mg/kg	0.00E+00	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	4.00E-04	5.58E-05	0.00E+00	6.35E-02	9.01E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.40E-02	5.07E+02	1.26E-04	1.13E+03	5.66E-05	0.00%	0.01%
Nitrate/Nitrite	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	3.01E+02								0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.07E+02	0.00E+00	1.13E+03	0.00E+00	0.00%	0.00%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E-04	mg/kg	#######			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.39E-08	5.39E-08	4.58E+00	1.18E-08	9.16E+00	5.89E-09	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg				8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.62E-04	mg/kg	#######			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.78E-07	1.78E-07	2.40E-01	7.40E-07	2.40E+00	7.40E-08	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-01	mg/kg				8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.82E-05	7.82E-05	2.40E-01	3.26E-04	2.40E+00	3.26E-05	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	7.70E-02	mg/kg	#######			3.00E-01	NA	3.19E+01	3.19E+01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	3.08E-06	3.08E-06	8.50E+00	3.62E-07	2.55E+01	1.21E-07	0.00%	0.00%
Selenium	0.00E+00	mg/L	6.32E-01	mg/kg	3.74E-01	mg/kg	#######	2.05E+02	4.50E+00	1.21E+00	8.19E-01	4.59E-01	4.59E-01	1.51E-01	1.51E-01	0.00E+00	5.93E-05	0.00E+00	0.00E+00	1.03E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.03E-05	1.11E-03	2.00E-01	5.53E-03	3.30E-01	3.35E-03	0.05%	0.31%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.30E+01	mg/kg	#######		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.19E-04	5.19E-04	2.63E+02	1.97E-06	7.89E+02	6.57E-07	0.00%	0.00%
Sulfate	2.88E+00	mg/L	2.58E+01	mg/kg	1.30E+02	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	3.54E-02	2.42E-03	0.00E+00	5.61E+00	3.91E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.19E-03	5.66E+00	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	7.50E+01	4.50E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.40E-03	0.00E+00	7.40E-02	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.98E-08	7.98E-08	4.58E+00	1.74E-08	9.16E+00	8.72E-09	0.00%	0.00%
Vanadium	0.00E+00	mg/L	2.60E+01	mg/kg	1.45E+01	mg/kg	#######	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	0.00E+00	2.44E-03	0.00E+00	0.00E+00	3.93E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.86E-05	6.40E-03	2.10E-01	3.05E-02	2.10E+00	3.05E-03	0.29%	0.28%
Zinc	0.00E+00	mg/L	4.30E+01	mg/kg	4.79E+01	mg/kg	#######	2.91E+03	1.94E+00	6.34E+00	9.28E-01	8.84E-01	8.84E-01	1.84E-01	1.84E-01	0.00E+00	4.03E-03	0.00E+00	0.00E+00	3.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.18E-03	3.72E-02	1.60E+02	2.32E-04	3.20E+02	1.16E-04	0.00%	0.01%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.0%	0.0%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	7.8E-08	3.9E-08	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	2.1E-06	4.1E-07	0.0%	0.0%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	6.6E-05	6.5E-06	0.0%	0.0%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	2.2E-05	2.2E-06	0.0%	0.0%
Aldrin/Dieldrin/Endrin EEQ:	4.1E-06	4.4E-07	0.0%	0.0%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\,x\,Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.9	unitless
Aq. Invert diet fraction =	0.05	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0.05	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0.00494	kg/d
Food ingestion rate =	0.38	kg/d
Body weight =	8	kg
Home range =	988	acres
Water intake rate =	0.648	L/d
Site Area =	150	acres
Area Use Factor (AUF) =	0.151822	unitless
Exposure Duration (ED) =	1	unitless

Table E-145
Tier 1 COPCs
EEQs and Hazard Indices for the Townsend's Big-Eared Bat at LHAAP
Low Impact Sub-Area/Saunders Branch Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF (Unitless)	Fish BAF (Unitless)	Aq. Invert. BAF (Unitless)	Terr. Invert. BAF (Unitless)	Aq. Plant BAF (Unitless)	Terr. Plant BAF (Unitless)	Plant Root BAF (Unitless)	Mammal BAF (Unitless)	Bird BAF
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg				1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00
2,3,7,8-TCDD TEQ	0.00E+00	mg/L	6.98E-06	mg/kg	3.95E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.40E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	4.30E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.23E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.87E-04	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.76E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Aluminum	0.00E+00	mg/L	1.63E+04	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	6.37E-01	mg/kg				1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.07E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.42E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.11E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	7.47E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.50E-04	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00
Barium	0.00E+00	mg/L	1.60E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	6.80E-02	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	3.06E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00
Cadmium	0.00E+00	mg/L	2.14E-01	mg/kg	3.84E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.58E+01	1.24E+00	9.52E-01	9.52E-01	9.22E-01	9.22E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.88E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.22E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Copper	0.00E+00	mg/L	1.07E+01	mg/kg	7.43E+00	mg/kg	1.00E+00	5.92E+03	5.25E+00	1.32E+00	4.60E-01	5.75E-01	5.75E-01	1.49E-01	1.49E-01
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.86E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.75E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.20E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00
Iron	0.00E+00	mg/L	0.00E+00	mg/kg	1.00E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01		
Lead	3.00E-03	mg/L	0.00E+00	mg/kg	2.51E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	4.39E-01	NA	6.40E-02	6.40E-02	1.33E-02	1.33E-02
Manganese	0.00E+00	mg/L	4.88E+02	mg/kg	9.35E+02	mg/kg	1.00E+00	2.00E+03	2.10E+00	2.21E-01	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.95E-02	mg/kg	1.00E+00		2.87E+00	7.16E+00	NA	1.35E+00	1.35E+00	1.03E-01	1.03E-01
Mercury (methyl)	0.00E+00	mg/L	8.01E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.17E+00	NA	NA		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.41E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00
Nickel	0.00E+00	mg/L	1.10E+01	mg/kg	7.10E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	5.96E-02	6.65E-02	6.65E-02	1.01E-01	1.01E-01
Nitrate	9.00E-02	mg/L	9.88E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Nitrate/Nitrite	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg				1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	8.83E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	4.23E-01	mg/kg				1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.80E-01	mg/kg	1.00E+00			1.14E+00	NA	1.88E+01	1.88E+01	1.66E-01	1.66E-01
Selenium	0.00E+00	mg/L	8.74E-01	mg/kg	4.13E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.18E+00	1.06E+00	4.64E-01	4.64E-01	1.95E-01	1.95E-01
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Sulfate	5.00E+00	mg/L	3.00E+01	mg/kg	2.30E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Thallium	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.04E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Vanadium	0.00E+00	mg/L	3.08E+01	mg/kg	1.53E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03
Zinc	0.00E+00	mg/L	5.15E+01	mg/kg	5.89E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.53E+00	8.57E-01	8.08E-01	8.08E-01	4.51E-01	4.51E-01

Chemical	EED Surface Water (mg/kg-d)	EED Sediment (mg/kg-d)	EED Soil (mg/kg-d)	EED Fish (mg/kg-d)	EED Aq. Invert. (mg/kg-d)	EED Terr. Invert. (mg/kg-d)	EED Aq. Plants (mg/kg-d)	EED Terr. Plants (mg/kg-d)	EED Plant Roots (mg/kg-d)	EED Mammals (mg/kg-d)	EED Birds (mg/kg-d)	Total EED (mg/kg-d)	NOAEL (mg/kg-d)	EEQ N	LOAEL (mg/kg-d)	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.34E-09	0.00E+00	0.00E+00	0.00E+00	1.34E-09	1.00E-06	1.34E-03	1.00E-05	1.34E-04	0.27%	0.08%
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.39E-06	0.00E+00	0.00E+00	0.00E+00	8.39E-06	8.00E-01	1.05E-05	4.00E+00	2.10E-06	0.00%	0.00%
4,4'-DDE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-04	0.00E+00	0.00E+00	0.00E+00	2.00E-04	8.00E-01	2.49E-04	4.00E+00	4.99E-05	0.05%	0.03%
4,4'-DDT	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E-05	0.00E+00	0.00E+00	0.00E+00	1.33E-05	8.00E-01	1.67E-05	4.00E+00	3.34E-06	0.00%	0.00%
Aldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.49E-08	0.00E+00	0.00E+00	0.00E+00	9.49E-08	2.00E-01	4.75E-07	1.00E+00	9.49E-08	0.00%	0.00%
alpha-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.14E-06	0.00E+00	0.00E+00	0.00E+00	1.14E-06	4.58E+00	2.48E-07	9.16E+00	1.24E-07	0.00%	0.00%
Aluminum	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.93E+00	0.00E+00	1.93E+01	0.00E+00	0.00%	0.00%
Antimony	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.34E-03	0.00E+00	0.00E+00	0.00E+00	3.34E-03	1.25E-01	2.67E-02	1.25E+00	2.67E-03	5.42%	1.66%
Aroclor 1242	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.75E-05	0.00E+00	0.00E+00	0.00E+00	3.75E-05	6.85E-02	5.47E-04	6.85E-01	5.47E-05	0.11%	0.03%
Aroclor 1248	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E-06	0.00E+00	0.00E+00	0.00E+00	1.07E-06	6.80E-02	1.58E-05	6.80E-01	1.58E-06	0.00%	0.00%
Aroclor 1254	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.72E-06	0.00E+00	0.00E+00	0.00E+00	2.72E-06	6.80E-02	4.00E-05	6.80E-01	4.00E-06	0.01%	0.00%
Aroclor 1260	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.54E-06	0.00E+00	0.00E+00	0.00E+00	2.54E-06	6.80E-02	3.74E-05	6.80E-01	3.74E-06	0.01%	0.00%
Aroclor 1268	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.35E-05	0.00E+00	0.00E+00	0.00E+00	3.35E-05	6.80E-02	4.92E-04	6.80E-01	4.92E-05	0.10%	0.03%
Barium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E+00	0.00E+00	1.98E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.64E-02	0.00E+00	0.00E+00	0.00E+00	1.64E-02	4.00E+00	4.09E-03	4.00E+01	4.09E-04	0.83%	0.25%
bis(2-ethylhexyl)phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.74E-02	0.00E+00	0.00E+00	0.00E+00	2.74E-02	1.00E+00	2.74E-02	1.00E+01	2.74E-03	5.56%	1.70%
Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.66E-07	0.00E+00	0.00E+00	0.00E+00	5.66E-07	4.58E+00	1.24E-07	9.16E+00	6.18E-08	0.00%	0.00%
Chromium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.40E-01	0.00E+00	0.00E+00	0.00E+00	4.40E-01	3.28E+00	1.34E-01	1.31E+01	3.35E-02	27.24%	20.77%
cis-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.47E-07	0.00E+00	0.00E+00	0.00E+00	7.47E-07	4.58E+00	1.63E-07	9.16E+00	8.16E-08	0.00%	0.00%
Copper	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.20E-01	0.00E+00	0.00E+00	0.00E+00	3.20E-01	1.17E+01	2.73E-02	1.51E+01	2.11E-02	5.55%	13.11%
Dieldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.28E-05	0.00E+00	0.00E+00	0.00E+00	2.28E-05	2.00E-02	1.14E-03	2.00E-01	1.14E-04	0.23%	0.07%
Endrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.88E-07	0.00E+00	0.00E+00	0.00E+00	7.88E-07	9.20E-02	8.56E-06	9.20E-01	8.56E-07	0.00%	0.00%
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.11E-07	0.00E+00	0.00E+00	0.00E+00	3.11E-07	8.00E-02	3.89E-06	2.90E-01	1.07E-06	0.00%	0.00%
HMX	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.00E+00	0.00E+00	0.00E+00	0.00E+00	3.00E+00	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	4.74E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	1.20E-01	0.00E+00	0.00E+00	0.00E+00	1.21E-01	8.00E+00	1.51E-02	8.00E+01	1.51E-03	3.07%	0.94%
Manganese	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E+00	8.80E+01	7.96E-02	2.84E+02	2.47E-02	16.16%	15.30%
Mercury (inorganic)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	6.00E-03	0.00E+00	0.00E+00	0.00E+00	6.00E-03	1.32E+01	4.55E-04	3.96E+01	1.52E-04	0.09%	0.09%
Mercury (methyl)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	3.20E-02	0.00E+00	1.60E-01	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.78E-07	0.00E+00	0.00E+00	0.00E+00	8.78E-07	7.00E-02	1.25E-05	7.00E-01	1.25E-06	0.00%	0.00%
Nickel	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-02	0.00E+00	0.00E+00	0.00E+00	3.54E-02	4.00E+01	8.84E-04	8.00E+01	4.42E-04	0.18%	0.27%
Nitrate	1.42E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	5.07E+02	2.80E-05	1.13E+03	1.26E-05	0.01%	0.01%
Nitrate/Nitrite	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.07E+02	0.00E+00	1.13E+03	0.00E+00	0.00%	0.00%
Oxychlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.47E-07	0.00E+00	0.00E+00	0.00E+00	3.47E-07	4.58E+00	7.57E-08	9.16E+00	3.78E-08	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.21E-06	0.00E+00	0.00E+00	0.00E+00	2.21E-06	2.40E-01	9.22E-06	2.40E+00	9.22E-07	0.00%	0.00%
Pentachlorophenol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.23E-03	0.00E+00	0.00E+00	0.00E+00	2.23E-03	2.40E-01	9.29E-03	2.40E+00	9.29E-04	1.89%	0.58%
Perchlorate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	3.94E-01	0.00E+00	0.00E+00	0.00E+00	3.94E-01	8.50E+00	4.63E-02	2.55E+01	1.54E-02	9.41%	9.58%
Selenium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.43E-02	0.00E+00	0.00E+00	0.00E+00	1.43E-02	2.00E-01	7.16E-02	3.30E-01	4.34E-02	14.54%	26.92%
Silver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.74E-01	0.00E+00	0.00E+00	0.00E+00	3.74E-01	2.63E+02	1.42E-03	7.89E+02	4.74E-04	0.29%	0.29%
Sulfate	7.89E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.02E+00	0.00E+00	0.00E+00	0.00E+00	6.81E+00	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.40E-03	0.00E+00	7.40E-02	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.16E-07	0.00E+00	0.00E+00	0.00E+00	9.16E-07	4.58E+00	2.00E-07	9.16E+00	1.00E-07	0.00%	0.00%
Vanadium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.59E-03	0.00E+00	0.00E+00	0.00E+00	4.59E-03	2.10E-01	2.19E-02	2.10E+00	2.19E-03	4.44%	1.36%
Zinc	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.56E+00	0.00E+00	0.00E+00	0.00E+00	3.56E+00	1.60E+02	2.23E-02	3.20E+02	1.11E-02	4.52%	6.91%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.0%	0.0%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	8.1E-07	4.1E-07	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	2.8E-04	5.5E-05	0.1%	0.0%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.1E-03	1.1E-04	0.2%	0.1%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.0%	0.0%
Aldrin/Dieldrin/Endrin EEQ:	1.1E-03	1.1E-04	0.2%	0.1%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text tables.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	1	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.000711	kg/d
Body weight =	0.0095	kg
Home range =	1310	acres
Water intake rate =	0.0015	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-146
Tier 2 COPCs
EEQs and Hazard Indices for the Townsend's Big-Eared Bat at LHAAP
Low Impact Sub-Area/Saunders Branch Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							Unitless	Unitless	Unitless	Unitless	Unitless	Unitless	Unitless	Unitless	Unitless	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	0.00E+00	1.33E+01	0.00E+00	0.00%	0.00%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg				7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	2.64E-01	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	0.00E+00	mg/L	6.98E-06	mg/kg	3.18E-06	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.56E-10	0.00E+00	0.00E+00	0.00E+00	7.56E-10	1.00E-06	7.56E-04	1.00E-05	7.56E-05	0.34%	0.09%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	3.00E-01	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.50E+00	0.00E+00	0.00%	0.00%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	6.00E-01	0.00E+00	0.00%	0.00%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	8.00E-04	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.37E-06	0.00E+00	0.00E+00	0.00E+00	1.37E-06	8.00E-01	1.72E-06	4.00E+00	3.43E-07	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	3.10E-03	mg/kg	1.00E+00		4.75E+00	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.58E-05	0.00E+00	0.00E+00	0.00E+00	2.58E-05	8.00E-01	3.23E-05	4.00E+00	6.46E-06	0.01%	0.01%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.07E-03	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E-06	0.00E+00	0.00E+00	0.00E+00	1.83E-06	8.00E-01	2.29E-06	4.00E+00	4.58E-07	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.24E-08	0.00E+00	0.00E+00	0.00E+00	5.24E-08	2.00E-01	2.62E-07	1.00E+00	5.24E-08	0.00%	0.00%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.15E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-07	0.00E+00	0.00E+00	0.00E+00	1.80E-07	4.58E+00	3.93E-08	9.16E+00	1.97E-08	0.00%	0.00%
Aluminum	0.00E+00	mg/L	1.18E+04	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.93E+00	0.00E+00	1.93E+01	0.00E+00	0.00%	0.00%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-01	mg/kg				3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E-03	0.00E+00	0.00E+00	0.00E+00	1.15E-03	1.25E-01	9.24E-03	1.25E+00	9.24E-04	4.10%	1.08%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.55E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.31E-06	0.00E+00	0.00E+00	0.00E+00	1.31E-06	6.85E-02	1.91E-05	6.85E-01	1.91E-06	0.01%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.21E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.21E-07	0.00E+00	0.00E+00	0.00E+00	6.21E-07	6.80E-02	9.13E-06	6.80E-01	9.13E-07	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	3.32E-03	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.27E-07	0.00E+00	0.00E+00	0.00E+00	7.27E-07	6.80E-02	1.07E-05	6.80E-01	1.07E-06	0.00%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	4.07E-03	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.60E-07	0.00E+00	0.00E+00	0.00E+00	1.60E-07	6.80E-02	2.36E-06	6.80E-01	2.36E-07	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	7.92E-04	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.55E-05	0.00E+00	0.00E+00	0.00E+00	2.55E-05	6.80E-02	3.76E-04	6.80E-01	3.76E-05	0.17%	0.04%
Barium	0.00E+00	mg/L	1.24E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E+00	0.00E+00	1.98E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	5.10E-02	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-02	0.00E+00	0.00E+00	0.00E+00	1.00E-02	4.00E+00	2.51E-03	4.00E+01	2.51E-04	1.11%	0.29%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.27E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	mg/L	1.62E-01	mg/kg	3.02E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	2.87E+01	1.40E+00	1.06E+00	1.06E+00	6.72E-01	6.72E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.96E-02	0.00E+00	0.00E+00	0.00E+00	1.96E-02	1.00E+00	1.96E-02	1.00E+01	1.96E-03	8.71%	2.30%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.89E-08	0.00E+00	0.00E+00	0.00E+00	9.89E-08	4.58E+00	2.16E-08	9.16E+00	1.08E-08	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.77E-02	0.00E+00	0.00E+00	0.00E+00	2.77E-02	3.28E+00	8.44E-03	1.31E+01	2.11E-03	3.74%	2.47%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.21E-07	0.00E+00	0.00E+00	0.00E+00	1.21E-07	4.58E+00	2.65E-08	9.16E+00	1.32E-08	0.00%	0.00%
Copper	0.00E+00	mg/L	8.76E+00	mg/kg	6.53E+00	mg/kg	1.00E+00	1.11E+03	1.56E+00	1.45E+00	5.20E-01	6.22E-01	6.22E-01	8.97E-02	8.97E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.49E-01	0.00E+00	0.00E+00	0.00E+00	2.49E-01	1.17E+01	2.13E-02	1.51E+01	1.64E-02	9.43%	19.24%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.72E-04	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.53E-07	0.00E+00	0.00E+00	0.00E+00	2.53E-07	2.00E-02	1.26E-05	2.00E-01	1.26E-06	0.01%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.99E-07	0.00E+00	0.00E+00	0.00E+00	3.99E-07	9.20E-02	4.34E-06	9.20E-01	4.34E-07	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.93E-04	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.88E-07	0.00E+00	0.00E+00	0.00E+00	1.88E-07	8.00E-02	2.35E-06	2.90E-01	6.48E-07	0.00%	0.00%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
Iron	0.00E+00	mg/L	0.00E+00	mg/kg	9.10E+03	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.23E+00	0.00E+00	0.00E+00	0.00E+00	2.23E+00	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	2.00E-03	mg/L	0.00E+00	mg/kg	2.21E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	4.50E-01	NA	6.78E-02	6.78E-02	1.16E-02	1.16E-02	2.58E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	9.17E-02	0.00E+00	0.00E+00	0.00E+00	9.19E-02	8.00E+00	1.15E-02	8.00E+01	1.15E-03	5.10%	1.35%
Manganese	0.00E+00	mg/L	3.46E+02	mg/kg	8.30E+02	mg/kg	1.00E+00	2.50E+02	4.20E-01	2.26E-01	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E+00	0.00E+00	0.00E+00	0.00E+00	4.02E+00	8.80E+01	4.56E-02	2.84E+02	1.41E-02	20.24%	16.55%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-02	mg/kg	1.00E+00		1.14E+00	7.64E+00	NA	1.41E+00	1.41E+00	9.15E-02	9.15E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	4.66E-03	0.00E+00	0.00E+00	0.00E+00	4.66E-03	1.32E+01	3.53E-04	3.96E+01	1.18E-04	0.16%	0.14%
Mercury (methyl)	0.00E+00	mg/L	5.78E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	1.37E+00	NA	NA			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	3.20E-02	0.00E+00	1.60E-01	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.88E-04	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.08E-08	0.00E+00	0.00E+00	0.00E+00	6.08E-08	7.00E-02	8.68E-07	7.00E-01	8.68E-08	0.00%	0.00%
Nickel	0.00E+00	mg/L	8.62E+00	mg/kg	6.36E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	6.34E-02	6.84E-02	6.84E-02	8.71E-02	8.71E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.66E-02	0.00E+00	0.00E+00	0.00E+00	2.66E-02	4.00E+01	6.66E-04	8.00E+01	3.33E-04	0.30%	0.39%
Nitrate	3.25E-02	mg/L	5.95E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	4.20E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.20E-03	5.07E+02	8.29E-06	1.13E+03	3.72E-06	0.00%	0.00%
Nitrate/Nitrite	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02								0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.07E+02	0.00E+00	1.13E+03	0.00E+00	0.00%	0.00%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E-04	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.75E-07	0.00E+00	0.00E+00	0.00E+00	2.75E-07	4.58E+00	6.01E-08	9.16E+00	3.01E-08	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg				8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	6.30E+00	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.62E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.43E-07	0.00E+00	0.00E+00	0.00E+00	9.43E-07	2.40E-01	3.93E-06	2.40E+00	3.93E-07	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-01	mg/kg				8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.45E-04	0.00E+00	0.00E+00	0.00E+00	6.45E-04	2.40E-01	2.69E-03	2.40E+00	2.69E-04	1.19%	0.31%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	7.70E-02	mg/kg	1.00E+00			3.00E-01	NA	3.19E+01	3.19E+01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	1.51E-01	0.00E+00	0.00E+00	0.00E+00	1.51E-01	8.50E+00	1.77E-02	2.55E+01	5.91E-03	7.86%	6.92%
Selenium	0.00E+00	mg/L	6.32E-01	mg/kg	3.74E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.21E+00	8.19E-01	4.59E-01	4.59E-01	1.51E-01	1.51E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E-02	0.00E+00	0.00E+00	0.00E+00	1.05E-02	2.00E-01	5.25E-02	3.30E-01	3.18E-02	23.30%	37.27%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.30E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.67E-01	0.00E+00	0.00E+00	0.00E+00	1.67E-01	2.63E+02	6.35E-04	7.89E+02	2.12E-04	0.28%	0.25%
Sulfate	2.88E+00	mg/L	2.58E+01	mg/kg	1.30E+02	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	3.72E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.67E+00	0.00E+00	0.00E+00	0.00E+00	2.04E+00	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.40E-03	0.00E+00	7.40E-02	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.44E-07	0.00E+00	0.00E+00	0.00E+00	1.44E-07	4.58E+00	3.15E-08	9.16E+00	1.58E-08	0.00%	0.00%
Vanadium	0.00E+00	mg/L	2.60E+01	mg/kg	1.45E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.19E-03	0.00E+00	0.00E+00	0.00E+00	3.19E-03	2.10E-01	1.52E-02	2.10E+00	1.52E-03	6.74%	1.78%
Zinc	0.00E+00	mg/L	4.30E+01	mg/kg	4.79E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	6.34E+00	9.28E-01	8.84E-01	8.84E-01	1.84E-01	1.84E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.60E+00	0.00E+00	0.00E+00	0.00E+00	2.60E+00	1.60E+02	1.62E-02	3.20E+02	8.12E-03	7.20%	9.50%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.0%	0.0%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.8E-07	8.9E-08	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	3.6E-05	7.3E-06	0.0%	0.0%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	4.2E-04	4.2E-05	0.2%	0.0%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.0%	0.0%
Aldrin/Dieldrin/Endrin EEQ:	1.7E-05	1.8E-06	0.0%	0.0%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	1	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.000711	kg/d
Body weight =	0.0095	kg
Home range =	3930	acres
Water intake rate =	0.0015	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	0.818575	unitless
Exposure Duration (ED) =	1	unitless

Table E-147
Tier 1 COPCs
EEQs and Hazard Indices for the Snapping Turtle at LHAAP
Low Impact Sub-Area/Saunders Branch Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							-----	-----	-----	-----	Unitless	-----	-----	-----	-----	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg				1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDD TEQ	0.00E+00	mg/L	6.98E-06	mg/kg	3.95E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	0.00E+00	1.11E-09	0.00E+00	0.00E+00	2.43E-08	0.00E+00	3.53E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.54E-08	NA	NA	NA	NA	NA	NA
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.40E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	4.30E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.23E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.87E-04	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.76E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aluminum	0.00E+00	mg/L	1.63E+04	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	0.00E+00	2.59E+00	0.00E+00	0.00E+00	1.17E+01	0.00E+00	4.17E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.43E+01	NA	NA	NA	NA	NA	NA
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	6.37E-01	mg/kg				1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.07E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.42E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.11E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	7.47E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.50E-04	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Barium	0.00E+00	mg/L	1.60E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	2.54E-02	0.00E+00	0.00E+00	1.15E-01	0.00E+00	1.64E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.04E-01	NA	NA	NA	NA	NA	NA
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	6.80E-02	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	3.06E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	0.00E+00	4.86E-05	0.00E+00	0.00E+00	1.06E-03	0.00E+00	5.34E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E-03	NA	NA	NA	NA	NA	NA
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	0.00E+00	mg/L	2.14E-01	mg/kg	3.84E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.58E+01	1.24E+00	9.52E-01	1.24E+00	9.22E-01	9.22E-01	0.00E+00	3.40E-05	0.00E+00	0.00E+00	2.72E-04	0.00E+00	2.95E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.01E-04	NA	NA	NA	NA	NA	NA
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.88E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.22E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Copper	0.00E+00	mg/L	1.07E+01	mg/kg	7.43E+00	mg/kg	1.00E+00	5.92E+03	5.25E+00	1.32E+00	4.60E-01	5.75E-01	4.60E-01	1.49E-01	1.49E-01	0.00E+00	1.70E-03	0.00E+00	0.00E+00	8.94E-03	0.00E+00	5.48E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.61E-02	NA	NA	NA	NA	NA	NA
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.86E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.75E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.20E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Iron	0.00E+00	mg/L	0.00E+00	mg/kg	1.00E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	3.00E-03	mg/L	0.00E+00	mg/kg	2.51E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	4.39E-01	NA	6.40E-02	NA	1.33E-02	1.33E-02	6.00E-05	0.00E+00	0.00E+00	7.87E-03	0.00E+00	0.00E+00	NA	0.00E+00	NA	0.00E+00	0.00E+00	7.93E-03	NA	NA	NA	NA	NA	NA
Manganese	0.00E+00	mg/L	4.88E+02	mg/kg	9.35E+02	mg/kg	1.00E+00	2.00E+03	2.10E+00	2.21E-01	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	0.00E+00	7.75E-02	0.00E+00	0.00E+00	1.63E-01	0.00E+00	5.43E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.95E-01	NA	NA	NA	NA	NA	NA
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.95E-02	mg/kg	1.00E+00		2.87E+00	7.16E+00	NA	1.35E+00	NA	1.03E-01	1.03E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Mercury (methyl)	0.00E+00	mg/L	8.01E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.17E+00	NA	1.17E+00			0.00E+00	1.27E-05	0.00E+00	0.00E+00	3.65E-05	NA	1.05E-04	NA	0.00E+00	0.00E+00	0.00E+00	1.54E-04	NA	NA	NA	NA	NA	NA
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.41E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	mg/L	1.10E+01	mg/kg	7.10E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	5.96E-02	6.65E-02	5.96E-02	1.01E-01	1.01E-01	0.00E+00	1.75E-03	0.00E+00	0.00E+00	4.07E-03	0.00E+00	7.32E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.56E-03	NA	NA	NA	NA	NA	NA
Nitrate	9.00E-02	mg/L	9.88E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	1.80E-03	1.57E-04	0.00E+00	1.68E-01	3.30E-04	0.00E+00	3.85E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.71E-01	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03								0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg				1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	8.83E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	4.23E-01	mg/kg				1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.80E-01	mg/kg	1.00E+00			1.14E+00	NA	1.88E+01	1.88E+01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Selenium	0.00E+00	mg/L	8.74E-01	mg/kg	4.13E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.18E+00	1.06E+00	4.64E-01	5.00E-01	1.95E-01	1.95E-01	0.00E+00	1.39E-04	0.00E+00	0.00E+00	6.25E-04	0.00E+00	1.03E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.79E-03	NA	NA	NA	NA	NA	NA
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Sulfate	5.00E+00	mg/L	3.00E+01	mg/kg	2.30E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	1.00E-01	4.76E-03	0.00E+00	9.33E+00	1.00E-02	0.00E+00	1.17E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.46E+00	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.04E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Vanadium	0.00E+00	mg/L	3.08E+01	mg/kg	1.53E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	0.00E+00	4.89E-03	0.00E+00	0.00E+00	1.03E-02	0.00E+00	1.37E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.53E-02	NA	NA	NA	NA	NA	NA
Zinc	0.00E+00	mg/L	5.15E+01	mg/kg	5.89E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.53E+00	8.57E-01	8.08E-01	8.57E-01	4.51E-01	4.51E-01	0.00E+00	8.17E-03	0.00E+00	0.00E+00	6.15E-02	0.00E+00	4.91E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.19E-01	NA	NA	NA	NA	NA	NA

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.0%	0.0%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	0.0E+00	0.0E+00	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	0.0E+00	0.0E+00	0.0%	0.0%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	0.0E+00	0.0E+00	0.0%	0.0%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.0%	0.0%
Aldrin/Dieldrin/Endrin EEQ:	0.0E+00	0.0E+00	0.0%	0.0%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0.35	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.55	unitless
Aq. Invert diet fraction =	0.05	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0.000889	kg/d
Food ingestion rate =	0.0178	kg/d
Body weight =	5.6	kg
Home range =	0.593051	acres
Water intake rate =	0.112	L/d
Site Area =	150	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-148
Tier 2 COPCs
EEQs and Hazard Indices for the Snapping Turtle at LHAAP
Low Impact Sub-Area/Saunders Branch Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							---Unitless---									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg				7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDD TEQ	0.00E+00	mg/L	6.98E-06	mg/kg	3.18E-06	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	0.00E+00	1.11E-09	0.00E+00	0.00E+00	5.18E-09	0.00E+00	3.01E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.32E-09	NA	NA	NA	NA	NA	NA
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	8.00E-04	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	3.10E-03	mg/kg	1.00E+00		4.75E+00	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.07E-03	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.15E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aluminum	0.00E+00	mg/L	1.18E+04	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	0.00E+00	1.88E+00	0.00E+00	0.00E+00	8.45E+00	0.00E+00	1.97E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.03E+01	NA	NA	NA	NA	NA	NA
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-01	mg/kg				3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.55E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.21E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	3.32E-03	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	4.07E-03	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	7.92E-04	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Barium	0.00E+00	mg/L	1.24E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	1.97E-02	0.00E+00	0.00E+00	8.86E-02	0.00E+00	2.15E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E-01	NA	NA	NA	NA	NA	NA
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	5.10E-02	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.27E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	0.00E+00	3.60E-05	0.00E+00	0.00E+00	1.68E-04	0.00E+00	1.38E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.05E-04	NA	NA	NA	NA	NA	NA
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	0.00E+00	mg/L	1.62E-01	mg/kg	3.02E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	2.87E+01	1.40E+00	1.06E+00	1.40E+00	6.72E-01	6.72E-01	0.00E+00	2.57E-05	0.00E+00	0.00E+00	1.54E-05	0.00E+00	2.53E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.94E-04	NA	NA	NA	NA	NA	NA
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Copper	0.00E+00	mg/L	8.76E+00	mg/kg	6.53E+00	mg/kg	1.00E+00	1.11E+03	1.56E+00	1.45E+00	5.20E-01	6.22E-01	5.20E-01	8.97E-02	8.97E-02	0.00E+00	1.39E-03	0.00E+00	0.00E+00	2.17E-03	0.00E+00	5.07E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.63E-03	NA	NA	NA	NA	NA	NA
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.72E-04	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.93E-04	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Iron	0.00E+00	mg/L	0.00E+00	mg/kg	9.10E+03	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	2.00E-03	mg/L	0.00E+00	mg/kg	2.21E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	4.50E-01	NA	6.78E-02	NA	1.16E-02	1.16E-02	4.00E-05	0.00E+00	0.00E+00	1.57E-03	0.00E+00	0.00E+00	NA	0.00E+00	NA	0.00E+00	0.00E+00	1.61E-03	NA	NA	NA	NA	NA	NA
Manganese	0.00E+00	mg/L	3.46E+02	mg/kg	8.30E+02	mg/kg	1.00E+00	2.50E+02	4.20E-01	2.26E-01	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	0.00E+00	5.50E-02	0.00E+00	0.00E+00	2.31E-02	0.00E+00	3.04E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E-01	NA	NA	NA	NA	NA	NA
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-02	mg/kg	1.00E+00		1.14E+00	7.64E+00	NA	1.41E+00	NA	9.15E-02	9.15E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Mercury (methyl)	0.00E+00	mg/L	5.78E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	1.37E+00	NA	1.37E+00			0.00E+00	9.18E-06	0.00E+00	0.00E+00	1.04E-05	NA	8.78E-05	NA	0.00E+00	0.00E+00	0.00E+00	1.07E-04	NA	NA	NA	NA	NA	NA
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.88E-04	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	mg/L	8.62E+00	mg/kg	6.36E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	6.34E-02	6.84E-02	6.34E-02	8.71E-02	8.71E-02	0.00E+00	1.37E-03	0.00E+00	0.00E+00	6.66E-04	0.00E+00	6.08E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.64E-03	NA	NA	NA	NA	NA	NA
Nitrate	3.25E-02	mg/L	5.95E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	6.50E-04	9.45E-05	0.00E+00	1.71E-02	3.97E-05	0.00E+00	1.39E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-02	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02								0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E-04	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg				8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.62E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-01	mg/kg				8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	7.70E-02	mg/kg	1.00E+00			3.00E-01	NA	3.19E+01	3.19E+01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Selenium	0.00E+00	mg/L	6.32E-01	mg/kg	3.74E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.21E+00	8.19E-01	4.59E-01	4.84E-01	1.51E-01	1.51E-01	0.00E+00	1.00E-04	0.00E+00	0.00E+00	4.52E-04	0.00E+00	5.76E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-03	NA	NA	NA	NA	NA	NA
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.30E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Sulfate	2.88E+00	mg/L	2.58E+01	mg/kg	1.30E+02	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	5.75E-02	4.10E-03	0.00E+00	1.51E+00	1.72E-03	0.00E+00	6.04E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.58E+00	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Vanadium	0.00E+00	mg/L	2.60E+01	mg/kg	1.45E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	0.00E+00	4.12E-03	0.00E+00	0.00E+00	1.73E-03	0.00E+00	1.04E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.96E-03	NA	NA	NA	NA	NA	NA
Zinc	0.00E+00	mg/L	4.30E+01	mg/kg	4.79E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	6.34E+00	9.28E-01	8.84E-01	9.28E-01	1.84E-01	1.84E-01	0.00E+00	6.82E-03	0.00E+00	0.00E+00	1.32E-02	0.00E+00	4.44E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.44E-02	NA	NA	NA	NA	NA	NA

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.0%	0.0%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	0.0E+00	0.0E+00	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	0.0E+00	0.0E+00	0.0%	0.0%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	0.0E+00	0.0E+00	0.0%	0.0%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.0%	0.0%
Aldrin/Dieldrin/Endrin EEQ:	0.0E+00	0.0E+00	0.0%	0.0%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\,x\,Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0.35	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.55	unitless
Aq. Invert diet fraction =	0.05	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0.000889	kg/d
Food ingestion rate =	0.0178	kg/d
Body weight =	5.6	kg
Home range =	11.21854	acres
Water intake rate =	0.112	L/d
Site Area =	150	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-149
Tier 1 COPCs
EEQs and Hazard Indices for the Bank Swallow at LHAAP
Low Impact Sub-Area/Saunders Branch Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							-----Unitless-----									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg				1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.22E-01	0.00E+00	1.27E+00	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	0.00E+00	mg/L	6.98E-06	mg/kg	3.95E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	0.00E+00	1.64E-08	0.00E+00	0.00E+00	6.50E-06	4.15E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.93E-06	1.40E-05	4.95E-01	1.40E-04	4.95E-02	1.42%	0.45%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.40E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.03E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.03E-04	2.80E-03	3.67E-02	2.80E-02	3.67E-03	0.11%	0.03%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	4.30E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.17E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.17E-04	5.80E-02	5.47E-03	5.80E-01	5.47E-04	0.02%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.23E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.70E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.70E-04	2.80E-03	6.06E-02	2.80E-02	6.06E-03	0.17%	0.06%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.87E-04	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-05	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.76E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.80E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.80E-05	2.14E+00	1.31E-05	1.07E+01	2.62E-06	0.00%	0.00%
Aluminum	0.00E+00	mg/L	1.63E+04	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	0.00E+00	3.84E+01	0.00E+00	0.00E+00	3.12E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.16E+03	1.10E+02	2.88E+01	3.29E+02	9.60E+00	82.89%	87.22%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	6.37E-01	mg/kg				1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.43E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.43E-03	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.07E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.29E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.29E-04	4.10E-01	5.59E-04	1.23E+00	1.86E-04	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.42E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.06E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.06E-04	1.80E-01	5.89E-04	1.80E+00	5.89E-05	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.11E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.15E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.15E-04	1.80E-01	1.75E-03	1.80E+00	1.75E-04	0.01%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	7.47E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.02E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.02E-04	1.80E-01	3.34E-03	1.80E+00	3.34E-04	0.01%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.50E-04	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.63E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.63E-05	1.80E-01	3.13E-04	1.80E+00	3.13E-05	0.00%	0.00%
Barium	0.00E+00	mg/L	1.60E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	3.77E-01	0.00E+00	0.00E+00	3.07E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.10E+01	2.08E+01	1.49E+00	4.17E+01	7.44E-01	4.30%	6.77%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	6.80E-02	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.26E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.26E-03	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	3.06E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	0.00E+00	7.20E-04	0.00E+00	0.00E+00	2.85E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.86E-01	1.11E+00	2.57E-01	3.33E+00	8.58E-02	0.74%	0.78%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	0.00E+00	mg/L	2.14E-01	mg/kg	3.84E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.58E+01	1.24E+00	9.52E-01	9.52E-01	9.22E-01	9.22E-01	0.00E+00	5.04E-04	0.00E+00	0.00E+00	7.27E-02	4.68E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E-01	1.45E+00	8.28E-02	2.00E+01	6.00E-03	0.24%	0.05%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.88E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.40E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.40E-05	2.14E+00	6.53E-06	1.07E+01	1.31E-06	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.22E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E-01	1.00E+00	1.83E-01	5.00E+00	3.66E-02	0.53%	0.33%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.84E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.84E-05	2.14E+00	8.62E-06	1.07E+01	1.72E-06	0.00%	0.00%
Copper	0.00E+00	mg/L	1.07E+01	mg/kg	7.43E+00	mg/kg	1.00E+00	5.92E+03	5.25E+00	1.32E+00	4.60E-01	5.75E-01	5.75E-01	1.49E-01	1.49E-01	0.00E+00	2.52E-02	0.00E+00	0.00E+00	2.39E+00	4.63E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.46E+00	4.70E+01	5.24E-02	6.17E+01	3.99E-02	0.15%	0.36%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.86E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.34E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.34E-05	7.70E-02	1.74E-04	2.31E-01	5.80E-05	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.75E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.99E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.99E-05	3.00E-01	6.62E-05	9.00E-01	2.21E-05	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.20E-01	0.00E+00	2.76E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.20E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.62E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.62E-05	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Iron	0.00E+00	mg/L	0.00E+00	mg/kg	1.00E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.70E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.70E+00	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	3.00E-03	mg/L	0.00E+00	mg/kg	2.51E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	4.39E-01	NA	6.40E-02	6.40E-02	1.33E-02	1.33E-02	7.19E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.22E-02	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.29E-02	1.13E+00	4.68E-02	1.13E+01	4.68E-03	0.13%	0.04%
Manganese	0.00E+00	mg/L	4.88E+02	mg/kg	9.35E+02	mg/kg	1.00E+00	2.00E+03	2.10E+00	2.21E-01	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	0.00E+00	1.15E+00	0.00E+00	0.00E+00	4.36E+01	9.77E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.57E+01	9.77E+02	4.68E-02	9.77E+03	4.68E-03	0.13%	0.04%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.95E-02	mg/kg	1.00E+00		2.87E+00	7.16E+00	NA	1.35E+00	1.35E+00	1.03E-01	1.03E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.01E-03	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.01E-03	4.50E-01	4.48E-03	9.00E-01	2.24E-03	0.01%	0.02%
Mercury (methyl)	0.00E+00	mg/L	8.01E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.17E+00	NA	NA			0.00E+00	1.89E-04	0.00E+00	0.00E+00	9.77E-03	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	9.96E-03	6.40E-03	1.56E+00	6.40E-02	1.56E-01	4.48%	1.41%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.41E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.62E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.62E-05	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	mg/L	1.10E+01	mg/kg	7.10E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	5.96E-02	6.65E-02	6.65E-02	1.01E-01	1.01E-01	0.00E+00	2.60E-02	0.00E+00	0.00E+00	1.09E+00	1.59E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E+00	7.74E+01	1.65E-02	1.07E+02	1.19E-02	0.05%	0.11%
Nitrate	9.00E-02	mg/L	9.88E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	2.16E-02	2.33E-03	0.00E+00	0.00E+00	8.82E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.12E-01	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03								0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E-05	2.14E+00	5.94E-06	1.07E+01	1.19E-06	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg				1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+02	0.00E+00	3.20E+02	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	8.83E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.34E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.34E-05	6.73E+00	9.41E-06	6.73E+01	9.41E-07	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	4.23E-01	mg/kg				1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.97E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.97E-02	6.73E+00	4.41E-03	6.73E+01	4.41E-04	0.01%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.80E-01	mg/kg	1.00E+00			1.14E+00	NA	1.88E+01	1.88E+01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.51E-03	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.51E-03	6.50E+01	2.32E-05	1.30E+02	1.16E-05	0.00%	0.00%
Selenium	0.00E+00	mg/L	8.74E-01	mg/kg	4.13E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.18E+00	1.06E+00	4.64E-01	4.64E-01	1.95E-01	1.95E-01	0.00E+00	2.06E-03	0.00E+00	0.00E+00	1.67E-01	2.30E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.72E-01	1.80E+00	9.54E-02	5.40E+00	3.18E-02	0.27%	0.29%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E+00	0.00E+00	5.44E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.87E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.87E-02	NA	NA	NA	NA	NA	NA
Sulfate	5.00E+00	mg/L	3.00E+01	mg/kg	2.30E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	1.20E+00	7.06E-02	0.00E+00	0.00E+00	2.68E+00	1.24E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.19E+00	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.50E-01	0.00E+00	1.05E+00	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.04E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.26E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.26E-05	2.14E+00	1.06E-05	1.07E+01	2.11E-06	0.00%	0.00%
Vanadium	0.00E+00	mg/L	3.08E+01	mg/kg	1.53E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	0.00E+00	7.25E-02	0.00E+00	0.00E+00	2.75E+00	6.38E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.83E+00	1.14E+01	2.48E-01	3.42E+01	8.27E-02	0.71%	0.75%
Zinc	0.00E+00	mg/L	5.15E+01	mg/kg	5.89E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.53E+00	8.57E-01	8.08E-01	8.08E-01	4.51E-01	4.51E-01	0.00E+00	1.21E-01	0.00E+00	0.00E+00	1.65E+01	1.54E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.81E+01	1.45E+01	1.25E+00	1.31E+02	1.38E-01	3.60%	1.26%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.0%	0.0%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	4.5E-05	8.9E-06	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	1.0E-01	1.0E-02	0.3%	0.1%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	6.6E-03	7.9E-04	0.0%	0.0%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	2.6E-01	8.6E-02	0.7%	0.8%
Aldrin/Dieldrin/Endrin EEQ:	2.4E-04	8.0E-05	0.0%	0.0%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\,x\,Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0.9	unitless
Terr. Invert diet fraction =	0.1	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	3.44E-05	kg/d
Food ingestion rate =	0.00069	kg/d
Body weight =	0.0146	kg
Home range =	49.4	acres
Water intake rate =	0.0035	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-150
Tier 2 COPCs
EEQs and Hazard Indices for the Bank Swallow at LHAAP
Low Impact Sub-Area/Saunders Branch Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
									---Unitless---							mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg				7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.22E-01	0.00E+00	1.27E+00	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	0.00E+00	mg/L	6.98E-06	mg/kg	3.18E-06	mg/kg	#######	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	0.00E+00	1.64E-08	0.00E+00	0.00E+00	1.39E-06	1.66E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.57E-06	1.40E-05	1.12E-01	1.40E-04	1.12E-02	0.48%	0.15%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	8.00E-04	mg/kg	#######		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.39E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.39E-05	2.80E-03	1.21E-02	2.80E-02	1.21E-03	0.05%	0.02%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	3.10E-03	mg/kg	#######		4.75E+00	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.32E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.32E-04	5.80E-02	2.27E-03	5.80E-01	2.27E-04	0.01%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.07E-03	mg/kg	#######		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.68E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.68E-05	2.80E-03	1.67E-02	2.80E-02	1.67E-03	0.07%	0.02%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	#######			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.71E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.71E-06	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.15E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.35E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.35E-05	2.14E+00	6.33E-06	1.07E+01	1.27E-06	0.00%	0.00%
Aluminum	0.00E+00	mg/L	1.18E+04	mg/kg	0.00E+00	mg/kg	#######	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	0.00E+00	2.78E+01	0.00E+00	0.00E+00	2.26E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.29E+03	1.10E+02	2.09E+01	3.29E+02	6.96E+00	89.75%	90.24%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-01	mg/kg				3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.22E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.22E-04	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.55E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E-04	4.10E-01	2.68E-04	1.23E+00	8.94E-05	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.21E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.21E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.21E-05	1.80E-01	2.89E-04	1.80E+00	2.89E-05	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	3.32E-03	mg/kg	#######		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.47E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.47E-04	1.80E-01	8.14E-04	1.80E+00	8.14E-05	0.00%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	4.07E-03	mg/kg	#######			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.89E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.89E-04	1.80E-01	1.05E-03	1.80E+00	1.05E-04	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	7.92E-04	mg/kg	#######			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.02E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.02E-05	1.80E-01	1.68E-04	1.80E+00	1.68E-05	0.00%	0.00%
Barium	0.00E+00	mg/L	1.24E+02	mg/kg	0.00E+00	mg/kg	#######	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	2.92E-01	0.00E+00	0.00E+00	2.37E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E+01	2.08E+01	1.15E+00	4.17E+01	5.76E-01	4.96%	7.46%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	5.10E-02	mg/kg	#######			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.84E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.84E-03	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.27E-01	mg/kg	0.00E+00	mg/kg	#######	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	0.00E+00	5.34E-04	0.00E+00	0.00E+00	4.51E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.56E-02	1.11E+00	4.11E-02	3.33E+00	1.37E-02	0.18%	0.18%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	0.00E+00	mg/L	1.62E-01	mg/kg	3.02E-01	mg/kg	#######	1.15E+03	6.00E-01	2.87E+01	1.40E+00	1.06E+00	1.06E+00	6.72E-01	6.72E-01	0.00E+00	3.81E-04	0.00E+00	0.00E+00	4.13E-03	4.11E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.56E-02	1.45E+00	3.14E-02	2.00E+01	2.28E-03	0.14%	0.03%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.43E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.43E-06	2.14E+00	3.47E-06	1.07E+01	6.94E-07	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E+01	mg/kg	#######	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E-02	1.00E+00	1.59E-02	5.00E+00	3.19E-03	0.07%	0.04%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.11E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.11E-06	2.14E+00	4.26E-06	1.07E+01	8.51E-07	0.00%	0.00%
Copper	0.00E+00	mg/L	8.76E+00	mg/kg	6.53E+00	mg/kg	#######	1.11E+03	1.56E+00	1.45E+00	5.20E-01	6.22E-01	6.22E-01	8.97E-02	8.97E-02	0.00E+00	2.06E-02	0.00E+00	0.00E+00	5.81E-01	4.49E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.47E-01	4.70E+01	1.38E-02	6.17E+01	1.05E-02	0.06%	0.14%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.72E-04	mg/kg	#######		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.15E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.15E-06	7.70E-02	9.29E-05	2.31E-01	3.10E-05	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-04	mg/kg	#######			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.90E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.90E-06	3.00E-01	3.30E-05	9.00E-01	1.10E-05	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.20E-01	0.00E+00	2.76E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.93E-04	mg/kg	#######			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.16E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.16E-06	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Iron	0.00E+00	mg/L	0.00E+00	mg/kg	9.10E+03	mg/kg	#######	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.55E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.55E+00	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	2.00E-03	mg/L	0.00E+00	mg/kg	2.21E+01	mg/kg	#######	4.48E+02	7.10E-02	4.50E-01	NA	6.78E-02	6.78E-02	1.16E-02	1.16E-02	4.79E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.70E-02	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.75E-02	1.13E+00	4.20E-02	1.13E+01	4.20E-03	0.18%	0.05%
Manganese	0.00E+00	mg/L	3.46E+02	mg/kg	8.30E+02	mg/kg	#######	2.50E+02	4.20E-01	2.26E-01	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	0.00E+00	8.15E-01	0.00E+00	0.00E+00	6.19E+00	8.86E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.89E+00	9.77E+02	8.07E-03	9.77E+03	8.07E-04	0.03%	0.01%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-02	mg/kg	#######		1.14E+00	7.64E+00	NA	1.41E+00	1.41E+00	9.15E-02	9.15E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.95E-03	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.95E-03	4.50E-01	4.33E-03	9.00E-01	2.17E-03	0.02%	0.03%
Mercury (methyl)	0.00E+00	mg/L	5.78E-02	mg/kg	0.00E+00	mg/kg	#######		1.14E+00	NA	1.37E+00	NA	NA			0.00E+00	1.36E-04	0.00E+00	0.00E+00	2.79E-03	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	2.93E-03	6.40E-03	4.58E-01	6.40E-02	4.58E-02	1.97%	0.59%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.88E-04	mg/kg	#######			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E-05	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	mg/L	8.62E+00	mg/kg	6.36E+00	mg/kg	#######		4.86E-01	1.06E+00	6.34E-02	6.84E-02	6.84E-02	8.71E-02	8.71E-02	0.00E+00	2.03E-02	0.00E+00	0.00E+00	1.78E-01	3.18E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.30E-01	7.74E+01	2.98E-03	1.07E+02	2.15E-03	0.01%	0.03%
Nitrate	3.25E-02	mg/L	5.95E-01	mg/kg	0.00E+00	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	7.79E-03	1.40E-03	0.00E+00	0.00E+00	1.06E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.98E-02	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	3.01E+02								0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E-04	mg/kg	#######			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.11E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.11E-06	2.14E+00	3.32E-06	1.07E+01	6.64E-07	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg				8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+02	0.00E+00	3.20E+02	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.62E-04	mg/kg	#######			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.32E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.32E-05	6.73E+00	3.45E-06	6.73E+01	3.45E-07	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-01	mg/kg				8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-02	6.73E+00	1.49E-03	6.73E+01	1.49E-04	0.01%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	7.70E-02	mg/kg	#######			3.00E-01	NA	3.19E+01	3.19E+01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E-04	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E-04	6.50E+01	1.68E-06	1.30E+02	8.40E-07	0.00%	0.00%
Selenium	0.00E+00	mg/L	6.32E-01	mg/kg	3.74E-01	mg/kg	#######	2.05E+02	4.50E+00	1.21E+00	8.19E-01	4.59E-01	4.59E-01	1.51E-01	1.51E-01	0.00E+00	1.49E-03	0.00E+00	0.00E+00	1.21E-01	2.14E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01	1.80E+00	6.92E-02	5.40E+00	2.31E-02	0.30%	0.30%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E+00	0.00E+00	5.44E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.30E+01	mg/kg	#######		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.34E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.34E-03	NA	NA	NA	NA	NA	NA
Sulfate	2.88E+00	mg/L	2.58E+01	mg/kg	1.30E+02	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	6.89E-01	6.08E-02	0.00E+00	0.00E+00	4.61E-01	1.84E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.40E+00	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	7.50E+01	4.50E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.50E-01	0.00E+00	1.05E+00	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E-05	2.14E+00	5.07E-06	1.07E+01	1.01E-06	0.00%	0.00%
Vanadium	0.00E+00	mg/L	2.60E+01	mg/kg	1.45E+01	mg/kg	#######	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	0.00E+00	6.11E-02	0.00E+00	0.00E+00	4.64E-01	2.87E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.28E-01	1.14E+01	4.63E-02	3.42E+01	1.54E-02	0.20%	0.20%
Zinc	0.00E+00	mg/L	4.30E+01	mg/kg	4.79E+01	mg/kg	#######	2.91E+03	1.94E+00	6.34E+00	9.28E-01	8.84E-01	8.84E-01	1.84E-01	1.84E-01	0.00E+00	1.01E-01	0.00E+00	0.00E+00	3.54E+00	1.44E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.07E+00	1.45E+01	3.50E-01	1.31E+02	3.87E-02	1.50%	0.50%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.0%	0.0%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	2.2E-05	4.5E-06	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	3.1E-02	3.1E-03	0.1%	0.0%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	2.6E-03	3.2E-04	0.0%	0.0%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	4.1E-02	1.4E-02	0.2%	0.2%
Aldrin/Dieldrin/Endrin EEQ:	1.3E-04	4.2E-05	0.0%	0.0%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0.9	unitless
Terr. Invert diet fraction =	0.1	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	3.44E-05	kg/d
Food ingestion rate =	0.00069	kg/d
Body weight =	0.0146	kg
Home range =	247	acres
Water intake rate =	0.0035	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-151
Tier 1 COPCs
EEQs and Hazard Indices for the American Woodcock at LHAAP
Low Impact Sub-Area/Saunders Branch Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							---Unitless---									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg				1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.22E-01	0.00E+00	1.27E+00	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	0.00E+00	mg/L	6.98E-06	mg/kg	3.95E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	0.00E+00	0.00E+00	5.07E-08	0.00E+00	0.00E+00	1.08E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E-05	1.40E-05	7.77E-01	1.40E-04	7.77E-02	5.48%	3.81%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.40E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.80E-05	0.00E+00	0.00E+00	2.68E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.70E-03	2.80E-03	9.65E-01	2.80E-02	9.65E-02	6.81%	4.73%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	4.30E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	5.52E-05	0.00E+00	0.00E+00	8.28E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.33E-03	5.80E-02	1.44E-01	5.80E-01	1.44E-02	1.01%	0.70%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.23E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	0.00E+00	2.86E-05	0.00E+00	0.00E+00	4.43E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.45E-03	2.80E-03	1.59E+00	2.80E-02	1.59E-01	11.23%	7.81%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.87E-04	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.40E-06	0.00E+00	0.00E+00	3.71E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.73E-04	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.76E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.83E-06	0.00E+00	0.00E+00	7.32E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.36E-04	2.14E+00	3.44E-04	1.07E+01	6.88E-05	0.00%	0.00%
Aluminum	0.00E+00	mg/L	1.63E+04	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E+02	0.00E+00	3.29E+02	0.00E+00	0.00%	0.00%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	6.37E-01	mg/kg				1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.96E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.96E-02	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.07E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.94E-05	0.00E+00	0.00E+00	5.98E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.02E-03	4.10E-01	1.47E-02	1.23E+00	4.90E-03	0.10%	0.24%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.42E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.82E-05	0.00E+00	0.00E+00	2.77E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.79E-03	1.80E-01	1.55E-02	1.80E+00	1.55E-03	0.11%	0.08%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.11E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	0.00E+00	5.28E-05	0.00E+00	0.00E+00	8.22E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.27E-03	1.80E-01	4.60E-02	1.80E+00	4.60E-03	0.32%	0.23%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	7.47E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	9.59E-05	0.00E+00	0.00E+00	1.57E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.58E-02	1.80E-01	8.78E-02	1.80E+00	8.78E-03	0.62%	0.43%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.50E-04	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.09E-05	0.00E+00	0.00E+00	1.47E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.48E-03	1.80E-01	8.22E-03	1.80E+00	8.22E-04	0.06%	0.04%
Barium	0.00E+00	mg/L	1.60E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.08E+01	0.00E+00	4.17E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	6.80E-02	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	8.73E-04	0.00E+00	0.00E+00	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.12E-01	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	3.06E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E+00	0.00E+00	3.33E+00	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	0.00E+00	mg/L	2.14E-01	mg/kg	3.84E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.58E+01	1.24E+00	9.52E-01	9.52E-01	9.22E-01	9.22E-01	0.00E+00	0.00E+00	4.93E-03	0.00E+00	0.00E+00	1.22E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.23E+00	1.45E+00	8.46E-01	2.00E+01	6.14E-02	5.97%	3.01%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.88E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.41E-06	0.00E+00	0.00E+00	3.65E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.67E-04	2.14E+00	1.71E-04	1.07E+01	3.43E-05	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.22E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	0.00E+00	0.00E+00	1.57E-01	0.00E+00	0.00E+00	4.78E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.93E+00	1.00E+00	4.93E+00	5.00E+00	9.87E-01	34.81%	48.41%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.18E-06	0.00E+00	0.00E+00	4.81E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.85E-04	2.14E+00	2.26E-04	1.07E+01	4.53E-05	0.00%	0.00%
Copper	0.00E+00	mg/L	1.07E+01	mg/kg	7.43E+00	mg/kg	1.00E+00	5.92E+03	5.25E+00	1.32E+00	4.60E-01	5.75E-01	5.75E-01	1.49E-01	1.49E-01	0.00E+00	0.00E+00	9.54E-02	0.00E+00	0.00E+00	1.21E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E+00	4.70E+01	2.77E-02	6.17E+01	2.11E-02	0.20%	1.04%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.86E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.38E-06	0.00E+00	0.00E+00	3.50E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.52E-04	7.70E-02	4.57E-03	2.31E-01	1.52E-03	0.03%	0.07%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.75E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	3.53E-06	0.00E+00	0.00E+00	5.19E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.22E-04	3.00E-01	1.74E-03	9.00E-01	5.80E-04	0.01%	0.03%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.20E-01	0.00E+00	2.76E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.20E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.83E-06	0.00E+00	0.00E+00	4.22E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.25E-04	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Iron	0.00E+00	mg/L	0.00E+00	mg/kg	1.00E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	0.00E+00	0.00E+00	1.29E+02	0.00E+00	0.00E+00	9.65E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.25E+02	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	3.00E-03	mg/L	0.00E+00	mg/kg	2.51E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	4.39E-01	NA	6.40E-02	6.40E-02	1.33E-02	1.33E-02	3.00E-04	0.00E+00	3.23E-01	0.00E+00	0.00E+00	1.36E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.68E+00	1.13E+00	1.49E+00	1.13E+01	1.49E-01	10.52%	7.32%
Manganese	0.00E+00	mg/L	4.88E+02	mg/kg	9.35E+02	mg/kg	1.00E+00	2.00E+03	2.10E+00	2.21E-01	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	0.00E+00	0.00E+00	1.20E+01	0.00E+00	0.00E+00	2.55E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.75E+01	9.77E+02	3.84E-02	9.77E+03	3.84E-03	0.27%	0.19%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.95E-02	mg/kg	1.00E+00		2.87E+00	7.16E+00	NA	1.35E+00	1.35E+00	1.03E-01	1.03E-01	0.00E+00	0.00E+00	7.64E-04	0.00E+00	0.00E+00	5.26E-02	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.33E-02	4.50E-01	1.19E-01	9.00E-01	5.93E-02	0.84%	2.91%
Mercury (methyl)	0.00E+00	mg/L	8.01E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.17E+00	NA	NA			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	6.40E-03	0.00E+00	6.40E-02	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.41E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.38E-06	0.00E+00	0.00E+00	6.83E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.88E-04	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	mg/L	1.10E+01	mg/kg	7.10E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	5.96E-02	6.65E-02	6.65E-02	1.01E-01	1.01E-01	0.00E+00	0.00E+00	9.12E-02	0.00E+00	0.00E+00	4.14E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.24E+00	7.74E+01	5.47E-02	1.07E+02	3.96E-02	0.39%	1.94%
Nitrate	9.00E-02	mg/L	9.88E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	9.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.00E-03	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03								0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.26E-06	0.00E+00	0.00E+00	3.32E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.34E-04	2.14E+00	1.56E-04	1.07E+01	3.12E-05	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg				1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+02	0.00E+00	3.20E+02	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	8.83E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.13E-05	0.00E+00	0.00E+00	1.65E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.67E-03	6.73E+00	2.47E-04	6.73E+01	2.47E-05	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	4.23E-01	mg/kg				1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.74E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.74E-01	6.73E+00	1.15E-01	6.73E+01	1.15E-02	0.81%	0.56%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.80E-01	mg/kg	1.00E+00			1.14E+00	NA	1.88E+01	1.88E+01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	3.59E-03	0.00E+00	0.00E+00	3.94E-02	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.30E-02	6.50E+01	6.61E-04	1.30E+02	3.31E-04	0.00%	0.02%
Selenium	0.00E+00	mg/L	8.74E-01	mg/kg	4.13E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.18E+00	1.06E+00	4.64E-01	4.64E-01	1.95E-01	1.95E-01	0.00E+00	0.00E+00	5.30E-03	0.00E+00	0.00E+00	6.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.53E-02	1.80E+00	3.63E-02	5.40E+00	1.21E-02	0.26%	0.59%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E+00	0.00E+00	5.44E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	1.83E-01	0.00E+00	0.00E+00	4.89E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E-01	NA	NA	NA	NA	NA	NA
Sulfate	5.00E+00	mg/L	3.00E+01	mg/kg	2.30E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	5.00E-01	0.00E+00	2.95E+00	0.00E+00	0.00E+00	3.23E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.58E+01	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.50E-01	0.00E+00	1.05E+00	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.04E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.90E-06	0.00E+00	0.00E+00	5.90E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.94E-04	2.14E+00	2.78E-04	1.07E+01	5.55E-05	0.00%	0.00%
Vanadium	0.00E+00	mg/L	3.08E+01	mg/kg	1.53E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	0.00E+00	0.00E+00	1.97E-01	0.00E+00	0.00E+00	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.63E-01	1.14E+01	3.19E-02	3.42E+01	1.06E-02	0.22%	0.52%
Zinc	0.00E+00	mg/L	5.15E+01	mg/kg	5.89E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.53E+00	8.57E-01	8.08E-01	8.08E-01	4.51E-01	4.51E-01	0.00E+00	0.00E+00	7.56E-01	0.00E+00	0.00E+00	4.01E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.09E+01	1.45E+01	2.82E+00	1.31E+02	3.12E-01	19.90%	15.31%

	EEQ N	EEQ L	Percent EEQ N	Percent EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.0%	0.0%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.2E-03	2.4E-04	0.01%	0.01%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	2.7E+00	2.7E-01	19.0%	13.2%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.7E-01	2.1E-02	1.2%	1.0%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.0%	0.0%
Aldrin/Dieldrin/Endrin EEQ:	6.3E-03	2.1E-03	0.0%	0.1%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi \, x \, Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	1	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.002529	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.0243	kg/d
Body weight =	0.197	kg
Home range =	0.74	acres
Water intake rate =	0.0197	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-152
Tier 2 COPCs
EEQs and Hazard Indices for the American Woodcock at LHAAP
Low Impact Sub-Area/Saunders Branch Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							-----	-----	-----	-----	Unitless	-----	-----	-----	-----	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg				7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.22E-01	0.00E+00	1.27E+00	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	0.00E+00	mg/L	6.98E-06	mg/kg	3.18E-06	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	0.00E+00	0.00E+00	4.09E-08	0.00E+00	0.00E+00	4.32E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.36E-06	1.40E-05	3.12E-01	1.40E-04	3.12E-02	4.62%	3.78%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	8.00E-04	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.03E-05	0.00E+00	0.00E+00	8.84E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.94E-04	2.80E-03	3.19E-01	2.80E-02	3.19E-02	4.73%	3.87%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	3.10E-03	mg/kg	1.00E+00		4.75E+00	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	3.98E-05	0.00E+00	0.00E+00	3.44E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.48E-03	5.80E-02	6.00E-02	5.80E-01	6.00E-03	0.89%	0.73%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.07E-03	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	1.37E-05	0.00E+00	0.00E+00	1.22E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.24E-03	2.80E-03	4.41E-01	2.80E-02	4.41E-02	6.54%	5.35%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.26E-06	0.00E+00	0.00E+00	2.01E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.03E-04	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.15E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.05E-06	0.00E+00	0.00E+00	3.53E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.57E-04	2.14E+00	1.67E-04	1.07E+01	3.34E-05	0.00%	0.00%
Aluminum	0.00E+00	mg/L	1.18E+04	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E+02	0.00E+00	3.29E+02	0.00E+00	0.00%	0.00%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-01	mg/kg				3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.88E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.88E-02	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.55E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.28E-05	0.00E+00	0.00E+00	2.87E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.90E-03	4.10E-01	7.08E-03	1.23E+00	2.36E-03	0.10%	0.29%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.21E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.55E-05	0.00E+00	0.00E+00	1.36E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.37E-03	1.80E-01	7.64E-03	1.80E+00	7.64E-04	0.11%	0.09%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	3.32E-03	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	4.26E-05	0.00E+00	0.00E+00	3.83E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.87E-03	1.80E-01	2.15E-02	1.80E+00	2.15E-03	0.32%	0.26%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	4.07E-03	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	5.23E-05	0.00E+00	0.00E+00	4.94E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.99E-03	1.80E-01	2.77E-02	1.80E+00	2.77E-03	0.41%	0.34%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	7.92E-04	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.02E-05	0.00E+00	0.00E+00	7.89E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.99E-04	1.80E-01	4.44E-03	1.80E+00	4.44E-04	0.07%	0.05%
Barium	0.00E+00	mg/L	1.24E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.08E+01	0.00E+00	4.17E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	5.10E-02	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	6.55E-04	0.00E+00	0.00E+00	4.81E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.88E-02	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.27E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E+00	0.00E+00	3.33E+00	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	0.00E+00	mg/L	1.62E-01	mg/kg	3.02E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	2.87E+01	1.40E+00	1.06E+00	1.06E+00	6.72E-01	6.72E-01	0.00E+00	0.00E+00	3.88E-03	0.00E+00	0.00E+00	1.07E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.08E+00	1.45E+00	7.42E-01	2.00E+01	5.38E-02	10.99%	6.52%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.22E-06	0.00E+00	0.00E+00	1.94E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.96E-04	2.14E+00	9.17E-05	1.07E+01	1.83E-05	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	0.00E+00	0.00E+00	1.42E-01	0.00E+00	0.00E+00	4.16E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.58E-01	1.00E+00	5.58E-01	5.00E+00	1.12E-01	8.26%	13.51%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.72E-06	0.00E+00	0.00E+00	2.38E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-04	2.14E+00	1.12E-04	1.07E+01	2.25E-05	0.00%	0.00%
Copper	0.00E+00	mg/L	8.76E+00	mg/kg	6.53E+00	mg/kg	1.00E+00	1.11E+03	1.56E+00	1.45E+00	5.20E-01	6.22E-01	6.22E-01	8.97E-02	8.97E-02	0.00E+00	0.00E+00	8.38E-02	0.00E+00	0.00E+00	1.17E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E+00	4.70E+01	2.67E-02	6.17E+01	2.03E-02	0.40%	2.46%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.72E-04	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.21E-06	0.00E+00	0.00E+00	1.87E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.89E-04	7.70E-02	2.45E-03	2.31E-01	8.18E-04	0.04%	0.10%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	3.05E-06	0.00E+00	0.00E+00	2.58E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.61E-04	3.00E-01	8.71E-04	9.00E-01	2.90E-04	0.01%	0.04%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.20E-01	0.00E+00	2.76E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.93E-04	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.48E-06	0.00E+00	0.00E+00	2.13E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.16E-04	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Iron	0.00E+00	mg/L	0.00E+00	mg/kg	9.10E+03	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	0.00E+00	0.00E+00	1.17E+02	0.00E+00	0.00E+00	4.04E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.57E+02	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	2.00E-03	mg/L	0.00E+00	mg/kg	2.21E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	4.50E-01	NA	6.78E-02	6.78E-02	1.16E-02	1.16E-02	2.00E-04	0.00E+00	2.83E-01	0.00E+00	0.00E+00	1.23E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.51E+00	1.13E+00	1.34E+00	1.13E+01	1.34E-01	19.79%	16.19%
Manganese	0.00E+00	mg/L	3.46E+02	mg/kg	8.30E+02	mg/kg	1.00E+00	2.50E+02	4.20E-01	2.26E-01	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	0.00E+00	0.00E+00	1.07E+01	0.00E+00	0.00E+00	2.31E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.38E+01	9.77E+02	3.46E-02	9.77E+03	3.46E-03	0.51%	0.42%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-02	mg/kg	1.00E+00		1.14E+00	7.64E+00	NA	1.41E+00	1.41E+00	9.15E-02	9.15E-02	0.00E+00	0.00E+00	6.94E-04	0.00E+00	0.00E+00	5.09E-02	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.16E-02	4.50E-01	1.15E-01	9.00E-01	5.73E-02	1.70%	6.95%
Mercury (methyl)	0.00E+00	mg/L	5.78E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	1.37E+00	NA	NA			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	6.40E-03	0.00E+00	6.40E-02	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.88E-04	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.70E-06	0.00E+00	0.00E+00	3.33E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.37E-04	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	mg/L	8.62E+00	mg/kg	6.36E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	6.34E-02	6.84E-02	6.84E-02	8.71E-02	8.71E-02	0.00E+00	0.00E+00	8.16E-02	0.00E+00	0.00E+00	8.31E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.12E-01	7.74E+01	1.18E-02	1.07E+02	8.53E-03	0.17%	1.03%
Nitrate	3.25E-02	mg/L	5.95E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	3.25E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.25E-03	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02								0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E-04	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.19E-06	0.00E+00	0.00E+00	1.85E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.88E-04	2.14E+00	8.77E-05	1.07E+01	1.75E-05	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg				8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+02	0.00E+00	3.20E+02	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.62E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	7.21E-06	0.00E+00	0.00E+00	6.06E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.14E-04	6.73E+00	9.12E-05	6.73E+01	9.12E-06	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-01	mg/kg				8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.61E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.61E-01	6.73E+00	3.89E-02	6.73E+01	3.89E-03	0.58%	0.47%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	7.70E-02	mg/kg	1.00E+00			3.00E-01	NA	3.19E+01	3.19E+01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	9.89E-04	0.00E+00	0.00E+00	2.85E-03	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.84E-03	6.50E+01	5.91E-05	1.30E+02	2.95E-05	0.00%	0.00%
Selenium	0.00E+00	mg/L	6.32E-01	mg/kg	3.74E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.21E+00	8.19E-01	4.59E-01	4.59E-01	1.51E-01	1.51E-01	0.00E+00	0.00E+00	4.80E-03	0.00E+00	0.00E+00	5.58E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.06E-02	1.80E+00	3.36E-02	5.40E+00	1.12E-02	0.50%	1.36%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E+00	0.00E+00	5.44E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.30E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	1.67E-01	0.00E+00	0.00E+00	1.39E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.06E-01	NA	NA	NA	NA	NA	NA
Sulfate	2.88E+00	mg/L	2.58E+01	mg/kg	1.30E+02	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	2.88E-01	0.00E+00	1.67E+00	0.00E+00	0.00E+00	4.81E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.77E+00	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.50E-01	0.00E+00	1.05E+00	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.24E-06	0.00E+00	0.00E+00	2.83E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.86E-04	2.14E+00	1.34E-04	1.07E+01	2.68E-05	0.00%	0.00%
Vanadium	0.00E+00	mg/L	2.60E+01	mg/kg	1.45E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	0.00E+00	0.00E+00	1.86E-01	0.00E+00	0.00E+00	7.50E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.61E-01	1.14E+01	2.29E-02	3.42E+01	7.62E-03	0.34%	0.92%
Zinc	0.00E+00	mg/L	4.30E+01	mg/kg	4.79E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	6.34E+00	9.28E-01	8.84E-01	8.84E-01	1.84E-01	1.84E-01	0.00E+00	0.00E+00	6.16E-01	0.00E+00	0.00E+00	3.75E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.81E+01	1.45E+01	2.63E+00	1.31E+02	2.91E-01	38.93%	35.26%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.0%	0.0%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	5.9E-04	1.2E-04	0.01%	0.01%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	8.2E-01	8.2E-02	12.2%	9.9%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	6.8E-02	8.5E-03	1.0%	1.0%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.0%	0.0%
Aldrin/Dieldrin/Endrin EEQ:	3.3E-03	1.1E-03	0.0%	0.1%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	1	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.002529	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.0243	kg/d
Body weight =	0.197	kg
Home range =	57	acres
Water intake rate =	0.0197	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-153
Tier 1 COPCs
EEQs and Hazard Indices for the Belted Kingfisher at LHAAP
Low Impact Sub-Area/Saunders Branch Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL		LOAEL		Percent Contribution to	Percent Contribution to
							-----Unitless-----									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	EEQ N	mg/kg-d	EEQ L	EEQ N	EEQ L
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg				1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.22E-01	0.00E+00	1.27E+00	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	0.00E+00	mg/L	6.98E-06	mg/kg	3.95E-06	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	0.00E+00	4.87E-08	0.00E+00	0.00E+00	2.67E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.72E-06	1.40E-05	1.94E-01	1.40E-04	1.94E-02	1.26%	0.40%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.40E-03	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.80E-03	0.00E+00	2.80E-02	0.00E+00	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	4.30E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.80E-02	0.00E+00	5.80E-01	0.00E+00	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.23E-03	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.80E-03	0.00E+00	2.80E-02	0.00E+00	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.87E-04	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.76E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Aluminum	0.00E+00	mg/L	1.63E+04	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	0.00E+00	1.14E+02	0.00E+00	0.00E+00	1.28E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.40E+03	1.10E+02	1.27E+01	3.29E+02	4.24E+00	82.65%	86.31%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	6.37E-01	mg/kg				1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.07E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.10E-01	0.00E+00	1.23E+00	0.00E+00	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.42E-03	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.11E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	7.47E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.50E-04	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Barium	0.00E+00	mg/L	1.60E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	1.12E+00	0.00E+00	0.00E+00	1.26E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.37E+01	2.08E+01	6.60E-01	4.17E+01	3.29E-01	4.28%	6.70%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	6.80E-02	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	3.06E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	0.00E+00	2.14E-03	0.00E+00	0.00E+00	1.17E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.19E-01	1.11E+00	1.07E-01	3.33E+00	3.58E-02	0.70%	0.73%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	0.00E+00	mg/L	2.14E-01	mg/kg	3.84E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.58E+01	1.24E+00	9.52E-01	9.52E-01	9.22E-01	9.22E-01	0.00E+00	1.49E-03	0.00E+00	0.00E+00	2.99E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.14E-02	1.45E+00	2.16E-02	2.00E+01	1.57E-03	0.14%	0.03%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.88E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.22E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Copper	0.00E+00	mg/L	1.07E+01	mg/kg	7.43E+00	mg/kg	1.00E+00	5.92E+03	5.25E+00	1.32E+00	4.60E-01	5.75E-01	5.75E-01	1.49E-01	1.49E-01	0.00E+00	7.48E-02	0.00E+00	0.00E+00	9.83E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.06E+00	4.70E+01	2.25E-02	6.17E+01	1.71E-02	0.15%	0.35%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.86E-04	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.70E-02	0.00E+00	2.31E-01	0.00E+00	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.75E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-02	0.00E+00	1.00E-01	0.00E+00	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.20E-01	0.00E+00	2.76E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.20E-04	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Iron	0.00E+00	mg/L	0.00E+00	mg/kg	1.00E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	3.00E-03	mg/L	0.00E+00	mg/kg	2.51E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	4.39E-01	NA	6.40E-02	6.40E-02	1.33E-02	1.33E-02	3.24E-04	0.00E+00	0.00E+00	5.51E-01	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.51E-01	3.85E+00	1.43E-01	1.16E+01	4.77E-02	0.93%	0.97%
Manganese	0.00E+00	mg/L	4.88E+02	mg/kg	9.35E+02	mg/kg	1.00E+00	2.00E+03	2.10E+00	2.21E-01	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	0.00E+00	3.41E+00	0.00E+00	0.00E+00	1.79E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.13E+01	9.77E+02	2.18E-02	9.77E+03	2.18E-03	0.14%	0.04%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.95E-02	mg/kg	1.00E+00		2.87E+00	7.16E+00	NA	1.35E+00	1.35E+00	1.03E-01	1.03E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.50E-01	0.00E+00	9.00E-01	0.00E+00	0.00%	0.00%
Mercury (methyl)	0.00E+00	mg/L	8.01E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.17E+00	NA	NA			0.00E+00	5.59E-04	0.00E+00	0.00E+00	4.02E-03	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	4.58E-03	6.40E-03	7.15E-01	6.40E-02	7.15E-02	4.64%	1.45%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.41E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	mg/L	1.10E+01	mg/kg	7.10E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	5.96E-02	6.65E-02	6.65E-02	1.01E-01	1.01E-01	0.00E+00	7.71E-02	0.00E+00	0.00E+00	4.48E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.25E-01	7.74E+01	6.78E-03	1.07E+02	4.91E-03	0.04%	0.10%
Nitrate	9.00E-02	mg/L	9.88E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	9.73E-03	6.90E-03	0.00E+00	1.18E+01	3.63E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.18E+01	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03								0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg				1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+02	0.00E+00	3.20E+02	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	8.83E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E+00	0.00E+00	6.73E+01	0.00E+00	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	4.23E-01	mg/kg				1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E+00	0.00E+00	6.73E+01	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.80E-01	mg/kg	1.00E+00			1.14E+00	NA	1.88E+01	1.88E+01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.50E+01	0.00E+00	1.30E+02	0.00E+00	0.00%	0.00%
Selenium	0.00E+00	mg/L	8.74E-01	mg/kg	4.13E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.18E+00	1.06E+00	4.64E-01	4.64E-01	1.95E-01	1.95E-01	0.00E+00	6.10E-03	0.00E+00	0.00E+00	6.88E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.49E-02	4.40E-01	1.70E-01	1.50E+00	4.99E-02	1.10%	1.02%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E+00	0.00E+00	5.44E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Sulfate	5.00E+00	mg/L	3.00E+01	mg/kg	2.30E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	5.41E-01	2.10E-01	0.00E+00	6.53E+02	1.10E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.55E+02	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.50E-01	0.00E+00	1.05E+00	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.04E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Vanadium	0.00E+00	mg/L	3.08E+01	mg/kg	1.53E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	0.00E+00	2.15E-01	0.00E+00	0.00E+00	1.13E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.35E+00	1.14E+01	1.18E-01	3.42E+01	3.94E-02	0.77%	0.80%
Zinc	0.00E+00	mg/L	5.15E+01	mg/kg	5.89E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.53E+00	8.57E-01	8.08E-01	8.08E-01	4.51E-01	4.51E-01	0.00E+00	3.59E-01	0.00E+00	0.00E+00	6.77E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.13E+00	1.45E+01	4.92E-01	1.31E+02	5.44E-02	3.19%	1.11%

	EEQ N	EEQ L	Percent EEQ N	Percent EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.0%	0.0%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	0.0E+00	0.0E+00	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	0.0E+00	0.0E+00	0.0%	0.0%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	0.0E+00	0.0E+00	0.0%	0.0%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	1.1E-01	3.6E-02	0.7%	0.7%
Aldrin/Dieldrin/Endrin EEQ:	0.0E+00	0.0E+00	0.0%	0.0%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\,x\,Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.875	unitless
Aq. Invert diet fraction =	0.125	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0.001034	kg/d
Food ingestion rate =	0.0207	kg/d
Body weight =	0.148	kg
Home range =	118.6101	acres
Water intake rate =	0.016	L/d
Site Area =	150	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-154
Tier 2 COPCs
EEQs and Hazard Indices for the Belted Kingfisher at LHAAP
Low Impact Sub-Area/Saunders Branch Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL		LOAEL		Percent Contribution to	Percent Contribution to
							-------	-------	-------	-------	-------Unitless-------	-------	-------	-------		mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	EEQ N	mg/kg-d	EEQ L	EEQ N	EEQ L
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg				7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.22E-01	0.00E+00	1.27E+00	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	0.00E+00	mg/L	6.98E-06	mg/kg	3.18E-06	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	0.00E+00	3.95E-09	0.00E+00	0.00E+00	4.61E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.01E-08	1.40E-05	3.58E-03	1.40E-04	3.58E-04	0.43%	0.13%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	8.00E-04	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.80E-03	0.00E+00	2.80E-02	0.00E+00	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	3.10E-03	mg/kg	1.00E+00		4.75E+00	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.80E-02	0.00E+00	5.80E-01	0.00E+00	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.07E-03	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.80E-03	0.00E+00	2.80E-02	0.00E+00	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.15E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Aluminum	0.00E+00	mg/L	1.18E+04	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	0.00E+00	6.68E+00	0.00E+00	0.00E+00	7.53E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.20E+01	1.10E+02	7.47E-01	3.29E+02	2.49E-01	89.05%	89.37%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-01	mg/kg				3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.55E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.10E-01	0.00E+00	1.23E+00	0.00E+00	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.21E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	3.32E-03	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	4.07E-03	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	7.92E-04	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Barium	0.00E+00	mg/L	1.24E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	7.00E-02	0.00E+00	0.00E+00	7.89E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.59E-01	2.08E+01	4.13E-02	4.17E+01	2.06E-02	4.92%	7.39%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	5.10E-02	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.27E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	0.00E+00	1.28E-04	0.00E+00	0.00E+00	1.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.63E-03	1.11E+00	1.47E-03	3.33E+00	4.89E-04	0.17%	0.18%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	0.00E+00	mg/L	1.62E-01	mg/kg	3.02E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	2.87E+01	1.40E+00	1.06E+00	1.06E+00	6.72E-01	6.72E-01	0.00E+00	9.16E-05	0.00E+00	0.00E+00	1.38E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.29E-04	1.45E+00	1.58E-04	2.00E+01	1.15E-05	0.02%	0.00%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Copper	0.00E+00	mg/L	8.76E+00	mg/kg	6.53E+00	mg/kg	1.00E+00	1.11E+03	1.56E+00	1.45E+00	5.20E-01	6.22E-01	6.22E-01	8.97E-02	8.97E-02	0.00E+00	4.95E-03	0.00E+00	0.00E+00	1.93E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.43E-02	4.70E+01	5.17E-04	6.17E+01	3.94E-04	0.06%	0.14%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.72E-04	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.70E-02	0.00E+00	2.31E-01	0.00E+00	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-02	0.00E+00	1.00E-01	0.00E+00	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.20E-01	0.00E+00	2.76E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.93E-04	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Iron	0.00E+00	mg/L	0.00E+00	mg/kg	9.10E+03	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	2.00E-03	mg/L	0.00E+00	mg/kg	2.21E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	4.50E-01	NA	6.78E-02	6.78E-02	1.16E-02	1.16E-02	1.75E-05	0.00E+00	0.00E+00	8.88E-03	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.89E-03	3.85E+00	2.31E-03	1.16E+01	7.70E-04	0.28%	0.28%
Manganese	0.00E+00	mg/L	3.46E+02	mg/kg	8.30E+02	mg/kg	1.00E+00	2.50E+02	4.20E-01	2.26E-01	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	0.00E+00	1.96E-01	0.00E+00	0.00E+00	2.06E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E-01	9.77E+02	4.11E-04	9.77E+03	4.11E-05	0.05%	0.01%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-02	mg/kg	1.00E+00		1.14E+00	7.64E+00	NA	1.41E+00	1.41E+00	9.15E-02	9.15E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.50E-01	0.00E+00	9.00E-01	0.00E+00	0.00%	0.00%
Mercury (methyl)	0.00E+00	mg/L	5.78E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	1.37E+00	NA	NA			0.00E+00	3.27E-05	0.00E+00	0.00E+00	9.30E-05	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	1.26E-04	6.40E-03	1.96E-02	6.40E-02	1.96E-03	2.34%	0.70%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.88E-04	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	mg/L	8.62E+00	mg/kg	6.36E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	6.34E-02	6.84E-02	6.84E-02	8.71E-02	8.71E-02	0.00E+00	4.88E-03	0.00E+00	0.00E+00	5.93E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.08E-02	7.74E+01	1.40E-04	1.07E+02	1.01E-04	0.02%	0.04%
Nitrate	3.25E-02	mg/L	5.95E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	2.84E-04	3.36E-04	0.00E+00	9.69E-02	3.54E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.78E-02	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02								0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E-04	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg				8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+02	0.00E+00	3.20E+02	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.62E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E+00	0.00E+00	6.73E+01	0.00E+00	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-01	mg/kg				8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E+00	0.00E+00	6.73E+01	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	7.70E-02	mg/kg	1.00E+00			3.00E-01	NA	3.19E+01	3.19E+01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.50E+01	0.00E+00	1.30E+02	0.00E+00	0.00%	0.00%
Selenium	0.00E+00	mg/L	6.32E-01	mg/kg	3.74E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.21E+00	8.19E-01	4.59E-01	4.59E-01	1.51E-01	1.51E-01	0.00E+00	3.57E-04	0.00E+00	0.00E+00	4.03E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.38E-03	4.40E-01	9.96E-03	1.50E+00	2.92E-03	1.19%	1.05%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E+00	0.00E+00	5.44E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.30E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Sulfate	2.88E+00	mg/L	2.58E+01	mg/kg	1.30E+02	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	2.52E-02	1.46E-02	0.00E+00	8.57E+00	1.54E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.62E+00	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.50E-01	0.00E+00	1.05E+00	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Vanadium	0.00E+00	mg/L	2.60E+01	mg/kg	1.45E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	0.00E+00	1.47E-02	0.00E+00	0.00E+00	1.54E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.01E-02	1.14E+01	2.64E-03	3.42E+01	8.81E-04	0.31%	0.32%
Zinc	0.00E+00	mg/L	4.30E+01	mg/kg	4.79E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	6.34E+00	9.28E-01	8.84E-01	8.84E-01	1.84E-01	1.84E-01	0.00E+00	2.43E-02	0.00E+00	0.00E+00	1.18E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-01	1.45E+01	9.79E-03	1.31E+02	1.08E-03	1.17%	0.39%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.0%	0.0%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	0.0E+00	0.0E+00	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	0.0E+00	0.0E+00	0.0%	0.0%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	0.0E+00	0.0E+00	0.0%	0.0%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	1.5E-03	4.9E-04	0.2%	0.2%
Aldrin/Dieldrin/Endrin EEQ:	0.0E+00	0.0E+00	0.0%	0.0%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi \, x \, Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text tables.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.875	unitless
Aq. Invert diet fraction =	0.125	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0.001034	kg/d
Food ingestion rate =	0.0207	kg/d
Body weight =	0.148	kg
Home range =	1853	acres
Water intake rate =	0.016	L/d
Site Area =	150	acres
Area Use Factor (AUF) =	0.08095	unitless
Exposure Duration (ED) =	1	unitless

Table E-155
Tier 1 COPCs
EEQs and Hazard Indices for the Red-tailed Hawk at LHAAP
Low Impact Sub-Area/Saunders Branch Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
									---Unitless---						
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg				1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00
2,3,7,8-TCDD TEQ	0.00E+00	mg/L	6.98E-06	mg/kg	3.95E-06	mg/kg	#######	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	1.40E-03	mg/kg	#######		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	4.30E-03	mg/kg	#######		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.23E-03	mg/kg	#######		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.87E-04	mg/kg	#######			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.76E-04	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Aluminum	0.00E+00	mg/L	1.63E+04	mg/kg	0.00E+00	mg/kg	#######	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	6.37E-01	mg/kg				1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.07E-03	mg/kg	#######			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.42E-03	mg/kg	#######			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.11E-03	mg/kg	#######		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	7.47E-03	mg/kg	#######			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	8.50E-04	mg/kg	#######			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00
Barium	0.00E+00	mg/L	1.60E+02	mg/kg	0.00E+00	mg/kg	#######	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	6.80E-02	mg/kg	#######			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	3.06E-01	mg/kg	0.00E+00	mg/kg	#######	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00
Cadmium	0.00E+00	mg/L	2.14E-01	mg/kg	3.84E-01	mg/kg	#######	1.63E+03	7.99E+00	2.58E+01	1.24E+00	9.52E-01	9.52E-01	9.22E-01	9.22E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.88E-04	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.22E+01	mg/kg	#######	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-04	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Copper	0.00E+00	mg/L	1.07E+01	mg/kg	7.43E+00	mg/kg	#######	5.92E+03	5.25E+00	1.32E+00	4.60E-01	5.75E-01	5.75E-01	1.49E-01	1.49E-01
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.86E-04	mg/kg	#######		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.75E-04	mg/kg	#######			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.20E-04	mg/kg	#######			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00
Iron	0.00E+00	mg/L	0.00E+00	mg/kg	1.00E+04	mg/kg	#######	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		2.19E+01		1.41E+01	1.41E+01	1.41E+01		
Lead	3.00E-03	mg/L	0.00E+00	mg/kg	2.51E+01	mg/kg	#######	1.50E+03	6.07E-01	4.39E-01	NA	6.40E-02	6.40E-02	1.33E-02	1.33E-02
Manganese	0.00E+00	mg/L	4.88E+02	mg/kg	9.35E+02	mg/kg	#######	2.00E+03	2.10E+00	2.21E-01	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.95E-02	mg/kg	#######		2.87E+00	7.16E+00	NA	1.35E+00	1.35E+00	1.03E-01	1.03E-01
Mercury (methyl)	0.00E+00	mg/L	8.01E-02	mg/kg	0.00E+00	mg/kg	#######		2.87E+00	NA	1.17E+00	NA	NA		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.41E-04	mg/kg	#######			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00
Nickel	0.00E+00	mg/L	1.10E+01	mg/kg	7.10E+00	mg/kg	#######		2.32E+00	4.73E+00	5.96E-02	6.65E-02	6.65E-02	1.01E-01	1.01E-01
Nitrate	9.00E-02	mg/L	9.88E-01	mg/kg	0.00E+00	mg/kg	#######	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Nitrate/Nitrite	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	1.07E+03							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	#######			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg				1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	8.83E-04	mg/kg	#######			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	4.23E-01	mg/kg				1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.80E-01	mg/kg	#######			1.14E+00	NA	1.88E+01	1.88E+01	1.66E-01	1.66E-01
Selenium	0.00E+00	mg/L	8.74E-01	mg/kg	4.13E-01	mg/kg	#######	2.05E+02	4.50E+00	1.18E+00	1.06E+00	4.64E-01	4.64E-01	1.95E-01	1.95E-01
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.50E+00		1.70E-01	1.70E-01	1.70E-01		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+01	mg/kg	#######		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Sulfate	5.00E+00	mg/L	3.00E+01	mg/kg	2.30E+02	mg/kg	#######	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Thallium	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	1.59E+04	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	3.04E-04	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Vanadium	0.00E+00	mg/L	3.08E+01	mg/kg	1.53E+01	mg/kg	#######	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03
Zinc	0.00E+00	mg/L	5.15E+01	mg/kg	5.89E+01	mg/kg	#######	5.00E+03	7.53E+00	5.53E+00	8.57E-01	8.08E-01	8.08E-01	4.51E-01	4.51E-01

Chemical	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL		LOAEL		Percent Contribution to	Percent Contribution to
	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	EEQ N	mg/kg-d	EEQ L	EEQ N	EEQ L
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.22E-01	0.00E+00	1.27E+00	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	0.00E+00	0.00E+00	2.38E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.56E-09	7.96E-10	7.73E-09	1.40E-05	5.52E-04	1.40E-04	5.52E-05	0.25%	0.15%
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	0.00E+00	8.43E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.06E-05	5.35E-06	3.68E-05	2.80E-03	1.31E-02	2.80E-02	1.31E-03	5.96%	3.49%
4,4'-DDE	0.00E+00	0.00E+00	2.59E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.11E-05	1.42E-05	9.78E-05	5.80E-02	1.69E-03	5.80E-01	1.69E-04	0.76%	0.45%
4,4'-DDT	0.00E+00	0.00E+00	1.34E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.03E-05	1.23E-05	8.39E-05	2.80E-03	3.00E-02	2.80E-02	3.00E-03	13.59%	7.96%
Aldrin	0.00E+00	0.00E+00	1.13E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.09E-06	7.14E-07	4.92E-06	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	0.00E+00	2.27E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.22E-06	1.44E-06	9.89E-06	2.14E+00	4.62E-06	1.07E+01	9.24E-07	0.00%	0.00%
Aluminum	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E+02	0.00E+00	3.29E+02	0.00E+00	0.00%	0.00%
Antimony	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.01E-03	3.51E-04	2.36E-03	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	0.00E+00	1.85E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.71E-05	1.17E-05	8.06E-05	4.10E-01	1.97E-04	1.23E+00	6.56E-05	0.09%	0.17%
Aroclor 1248	0.00E+00	0.00E+00	8.54E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.10E-05	5.42E-06	3.73E-05	1.80E-01	2.07E-04	1.80E+00	2.07E-05	0.09%	0.06%
Aroclor 1254	0.00E+00	0.00E+00	2.47E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.28E-05	1.45E-05	9.97E-05	1.80E-01	5.54E-04	1.80E+00	5.54E-05	0.25%	0.15%
Aroclor 1260	0.00E+00	0.00E+00	4.50E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.72E-04	4.75E-05	3.24E-04	1.80E-01	1.80E-03	1.80E+00	1.80E-04	0.82%	0.48%
Aroclor 1268	0.00E+00	0.00E+00	5.12E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.86E-05	3.24E-06	2.23E-05	1.80E-01	1.24E-04	1.80E+00	1.24E-05	0.06%	0.03%
Barium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.08E+01	0.00E+00	4.17E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	0.00E+00	4.09E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.49E-03	2.59E-04	1.79E-03	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E+00	0.00E+00	3.33E+00	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	0.00E+00	0.00E+00	2.31E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.72E-03	1.17E-03	8.12E-03	1.45E+00	5.60E-03	2.00E+01	4.06E-04	2.54%	1.08%
Chlordane	0.00E+00	0.00E+00	1.13E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.10E-06	7.16E-07	4.93E-06	2.14E+00	2.30E-06	1.07E+01	4.60E-07	0.00%	0.00%
Chromium	0.00E+00	0.00E+00	7.37E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.74E-02	1.35E-02	9.83E-02	1.00E+00	9.83E-02	5.00E+00	1.97E-02	44.57%	52.24%
cis-Nonachlor	0.00E+00	0.00E+00	1.49E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.41E-06	9.45E-07	6.51E-06	2.14E+00	3.04E-06	1.07E+01	6.08E-07	0.00%	0.00%
Copper	0.00E+00	0.00E+00	4.47E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.11E-02	3.68E-03	2.92E-02	4.70E+01	6.21E-04	6.17E+01	4.73E-04	0.28%	1.26%
Dieldrin	0.00E+00	0.00E+00	1.12E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.06E-06	7.08E-07	4.88E-06	7.70E-02	6.33E-05	2.31E-01	2.11E-05	0.03%	0.06%
Endrin	0.00E+00	0.00E+00	1.66E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.35E-06	1.11E-06	7.63E-06	1.00E-02	7.63E-04	1.00E-01	7.63E-05	0.35%	0.20%
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.20E-01	0.00E+00	2.76E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	0.00E+00	1.33E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.82E-06	8.41E-07	5.79E-06	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Iron	0.00E+00	0.00E+00	6.04E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.94E-01	6.87E-02	6.50E+00	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	1.71E-04	0.00E+00	1.51E-02	3.52E-02	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	6.34E-03	1.11E-03	5.80E-02	3.85E+00	1.51E-02	1.16E+01	5.02E-03	6.83%	13.34%
Manganese	0.00E+00	0.00E+00	5.63E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.70E-01	2.97E-02	7.63E-01	9.77E+02	7.81E-04	9.77E+03	7.81E-05	0.35%	0.21%
Mercury (inorganic)	0.00E+00	0.00E+00	3.58E-05	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	1.16E-04	2.03E-05	1.72E-04	4.50E-01	3.83E-04	9.00E-01	1.92E-04	0.17%	0.51%
Mercury (methyl)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	6.40E-03	0.00E+00	6.40E-02	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	0.00E+00	2.05E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.46E-06	1.30E-06	8.97E-06	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	0.00E+00	4.28E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E-02	2.38E-03	2.03E-02	7.74E+01	2.62E-04	1.07E+02	1.89E-04	0.12%	0.50%
Nitrate	5.12E-03	0.00E+00	0.00E+00	7.52E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.57E-01	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	0.00E+00	1.06E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.84E-06	6.71E-07	4.62E-06	2.14E+00	2.16E-06	1.07E+01	4.32E-07	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+02	0.00E+00	3.20E+02	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	0.00E+00	5.32E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.93E-05	3.37E-06	2.32E-05	6.73E+00	3.45E-06	6.73E+01	3.45E-07	0.00%	0.00%
Pentachlorophenol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.24E-03	1.61E-03	1.09E-02	6.73E+00	1.61E-03	6.73E+01	1.61E-04	0.73%	0.43%
Perchlorate	0.00E+00	0.00E+00	1.69E-04	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	8.83E-04	1.54E-04	1.21E-03	6.50E+01	1.85E-05	1.30E+02	9.27E-06	0.01%	0.02%
Selenium	0.00E+00	0.00E+00	2.48E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.53E-03	2.66E-04	2.04E-03	4.40E-01	4.64E-03	1.50E+00	1.36E-03	2.10%	3.61%
Silver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E+00	0.00E+00	5.44E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	0.00E+00	8.59E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.50E-02	7.85E-03	6.14E-02	NA	NA	NA	NA	NA	NA
Sulfate	2.84E-01	0.00E+00	1.38E-01	4.18E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.25E-01	1.27E-01	4.31E+01	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.50E-01	0.00E+00	1.05E+00	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	0.00E+00	1.83E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.63E-06	1.16E-06	7.98E-06	2.14E+00	3.73E-06	1.07E+01	7.45E-07	0.00%	0.00%
Vanadium	0.00E+00	0.00E+00	9.23E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.72E-03	3.01E-04	1.13E-02	1.14E+01	9.87E-04	3.42E+01	3.29E-04	0.45%	0.87%
Zinc	0.00E+00	0.00E+00	3.54E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.03E-01	8.79E-02	6.27E-01	1.45E+01	4.32E-02	1.31E+02	4.78E-03	19.60%	12.71%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.0%	0.0%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.6E-05	3.2E-06	0.01%	0.01%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	4.5E-02	4.5E-03	20.3%	11.9%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	2.9E-03	3.3E-04	1.3%	0.9%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.0%	0.0%
Aldrin/Dieldrin/Endrin EEQ:	8.3E-04	9.7E-05	0.4%	0.3%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\, x\, Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.26	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0.63	unitless
Bird diet fraction =	0.11	unitless
Soil ingestion rate =	0.000678	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.0339	kg/d
Body weight =	1.126	kg
Home range =	941	acres
Water intake rate =	0.064	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-156
Tier 2 COPCs
EEQs and Hazard Indices for the Red-tailed Hawk at LHAAP
Low Impact Sub-Area/Saunders Branch Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL		LOAEL		Percent Contribution to	Percent Contribution to
							--------	--------	--------	--------	--------Unitless--------	--------	--------	--------		mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	EEQ N	mg/kg-d	EEQ L	EEQ N	EEQ L
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg				7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.22E-01	0.00E+00	1.27E+00	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	0.00E+00	mg/L	6.98E-06	mg/kg	3.18E-06	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	0.00E+00	0.00E+00	1.92E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.85E-09	4.98E-10	5.27E-09	1.40E-05	3.76E-04	1.40E-04	3.76E-05	0.49%	0.28%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	8.00E-04	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.82E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E-05	2.32E-06	1.61E-05	2.80E-03	5.75E-03	2.80E-02	5.75E-04	7.50%	4.27%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	3.10E-03	mg/kg	1.00E+00		4.75E+00	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	1.87E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.54E-05	9.67E-06	6.69E-05	5.80E-02	1.15E-03	5.80E-01	1.15E-04	1.50%	0.86%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.07E-03	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	6.43E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-05	3.14E-06	2.17E-05	2.80E-03	7.77E-03	2.80E-02	7.77E-04	10.12%	5.76%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.76E-04	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.06E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.93E-06	5.11E-07	3.54E-06	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	3.15E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.90E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.24E-06	9.15E-07	6.34E-06	2.14E+00	2.96E-06	1.07E+01	5.93E-07	0.00%	0.00%
Aluminum	0.00E+00	mg/L	1.18E+04	mg/kg	0.00E+00	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E+02	0.00E+00	3.29E+02	0.00E+00	0.00%	0.00%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	5.09E-01	mg/kg				3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E-03	1.87E-04	1.26E-03	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.55E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.54E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.24E-05	7.41E-06	5.14E-05	4.10E-01	1.25E-04	1.23E+00	4.18E-05	0.16%	0.31%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	1.21E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	7.27E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.01E-05	3.51E-06	2.43E-05	1.80E-01	1.35E-04	1.80E+00	1.35E-05	0.18%	0.10%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	3.32E-03	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	2.00E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.13E-05	5.47E-06	3.88E-05	1.80E-01	2.15E-04	1.80E+00	2.15E-05	0.28%	0.16%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	4.07E-03	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	2.45E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.29E-04	2.25E-05	1.54E-04	1.80E-01	8.55E-04	1.80E+00	8.55E-05	1.11%	0.63%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	7.92E-04	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.77E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.32E-05	2.30E-06	1.59E-05	1.80E-01	8.86E-05	1.80E+00	8.86E-06	0.12%	0.07%
Barium	0.00E+00	mg/L	1.24E+02	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.08E+01	0.00E+00	4.17E+01	0.00E+00	0.00%	0.00%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	5.10E-02	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.07E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.48E-04	1.48E-04	1.03E-03	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.27E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E+00	0.00E+00	3.33E+00	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	0.00E+00	mg/L	1.62E-01	mg/kg	3.02E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	2.87E+01	1.40E+00	1.06E+00	1.06E+00	6.72E-01	6.72E-01	0.00E+00	0.00E+00	1.82E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.86E-03	6.74E-04	4.71E-03	1.45E+00	3.25E-03	2.00E+01	2.36E-04	4.24%	1.75%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.73E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.04E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.88E-06	5.02E-07	3.48E-06	2.14E+00	1.63E-06	1.07E+01	3.25E-07	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	0.00E+00	0.00E+00	6.63E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.77E-02	3.09E-03	2.74E-02	1.00E+00	2.74E-02	5.00E+00	5.48E-03	35.72%	40.67%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.28E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.52E-06	6.15E-07	4.27E-06	2.14E+00	1.99E-06	1.07E+01	3.99E-07	0.00%	0.00%
Copper	0.00E+00	mg/L	8.76E+00	mg/kg	6.53E+00	mg/kg	1.00E+00	1.11E+03	1.56E+00	1.45E+00	5.20E-01	6.22E-01	6.22E-01	8.97E-02	8.97E-02	0.00E+00	0.00E+00	3.93E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E-02	1.94E-03	1.70E-02	4.70E+01	3.61E-04	6.17E+01	2.75E-04	0.47%	2.04%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	1.72E-04	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.03E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.86E-06	4.99E-07	3.46E-06	7.70E-02	4.49E-05	2.31E-01	1.50E-05	0.06%	0.11%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	1.43E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.48E-06	9.56E-07	6.58E-06	1.00E-02	6.58E-04	1.00E-01	6.58E-05	0.86%	0.49%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.20E-01	0.00E+00	2.76E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.93E-04	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.16E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.21E-06	5.60E-07	3.89E-06	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Iron	0.00E+00	mg/L	0.00E+00	mg/kg	9.10E+03	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	0.00E+00	0.00E+00	5.48E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.03E-01	5.30E-02	5.83E+00	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	2.00E-03	mg/L	0.00E+00	mg/kg	2.21E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	4.50E-01	NA	6.78E-02	6.78E-02	1.16E-02	1.16E-02	1.14E-04	0.00E+00	1.33E-02	7.01E-03	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	4.88E-03	8.51E-04	2.61E-02	3.85E+00	6.79E-03	1.16E+01	2.26E-03	8.85%	16.79%
Manganese	0.00E+00	mg/L	3.46E+02	mg/kg	8.30E+02	mg/kg	1.00E+00	2.50E+02	4.20E-01	2.26E-01	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	0.00E+00	0.00E+00	4.99E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.19E-01	2.08E-02	6.40E-01	9.77E+02	6.55E-04	9.77E+03	6.55E-05	0.85%	0.49%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	5.40E-02	mg/kg	1.00E+00		1.14E+00	7.64E+00	NA	1.41E+00	1.41E+00	9.15E-02	9.15E-02	0.00E+00	0.00E+00	3.25E-05	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	9.37E-05	1.64E-05	1.43E-04	4.50E-01	3.17E-04	9.00E-01	1.58E-04	0.41%	1.18%
Mercury (methyl)	0.00E+00	mg/L	5.78E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	1.37E+00	NA	NA			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	6.40E-03	0.00E+00	6.40E-02	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.88E-04	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.74E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.80E-06	8.37E-07	5.81E-06	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	mg/L	8.62E+00	mg/kg	6.36E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	6.34E-02	6.84E-02	6.84E-02	8.71E-02	8.71E-02	0.00E+00	0.00E+00	3.83E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E-02	1.83E-03	1.62E-02	7.74E+01	2.09E-04	1.07E+02	1.51E-04	0.27%	1.12%
Nitrate	3.25E-02	mg/L	5.95E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	1.85E-03	0.00E+00	0.00E+00	7.65E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.84E-02	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02								0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E-04	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.03E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.84E-06	4.95E-07	3.43E-06	2.14E+00	1.60E-06	1.07E+01	3.21E-07	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg				8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+02	0.00E+00	3.20E+02	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	5.62E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.38E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.34E-06	1.63E-06	1.13E-05	6.73E+00	1.68E-06	6.73E+01	1.68E-07	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	2.48E-01	mg/kg				8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.11E-03	7.18E-04	4.83E-03	6.73E+00	7.18E-04	6.73E+01	7.18E-05	0.94%	0.53%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	7.70E-02	mg/kg	1.00E+00			3.00E-01	NA	3.19E+01	3.19E+01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	4.64E-05	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	1.62E-04	2.82E-05	2.36E-04	6.50E+01	3.64E-06	1.30E+02	1.82E-06	0.00%	0.01%
Selenium	0.00E+00	mg/L	6.32E-01	mg/kg	3.74E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.21E+00	8.19E-01	4.59E-01	4.59E-01	1.51E-01	1.51E-01	0.00E+00	0.00E+00	2.25E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E-03	1.87E-04	1.48E-03	4.40E-01	3.37E-03	1.50E+00	9.88E-04	4.39%	7.33%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E+00	0.00E+00	5.44E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	1.30E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	7.82E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.73E-02	4.76E-03	3.99E-02	NA	NA	NA	NA	NA	NA
Sulfate	2.88E+00	mg/L	2.58E+01	mg/kg	1.30E+02	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	1.63E-01	0.00E+00	7.82E-02	6.77E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.73E-01	4.77E-02	7.33E+00	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.50E-01	0.00E+00	1.05E+00	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	2.53E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.52E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.20E-06	7.33E-07	5.08E-06	2.14E+00	2.38E-06	1.07E+01	4.75E-07	0.00%	0.00%
Vanadium	0.00E+00	mg/L	2.60E+01	mg/kg	1.45E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	0.00E+00	0.00E+00	8.71E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.51E-03	2.63E-04	1.05E-02	1.14E+01	9.19E-04	3.42E+01	3.06E-04	1.20%	2.27%
Zinc	0.00E+00	mg/L	4.30E+01	mg/kg	4.79E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	6.34E+00	9.28E-01	8.84E-01	8.84E-01	1.84E-01	1.84E-01	0.00E+00	0.00E+00	2.89E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.67E-01	2.92E-02	2.26E-01	1.45E+01	1.56E-02	1.31E+02	1.72E-03	20.27%	12.77%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.0%	0.0%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.1E-05	2.1E-06	0.01%	0.02%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	1.5E-02	1.5E-03	19.1%	10.9%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.4E-03	1.7E-04	1.9%	1.3%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.0%	0.0%
Aldrin/Dieldrin/Endrin EEQ:	7.0E-04	8.1E-05	0.9%	0.6%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\,x\,Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text tables.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.26	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0.63	unitless
Bird diet fraction =	0.11	unitless
Soil ingestion rate =	0.000678	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.0339	kg/d
Body weight =	1.126	kg
Home range =	1722	acres
Water intake rate =	0.064	L/d
Site Area =	3217	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-157
Tier 1 COPCs
EEQs and Hazard Indices for the Deer Mouse at LHAAP
Waste Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL		LOAEL		Percent Contribution to	Percent Contribution to
							-----Unitless-----									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	EEQ N	mg/kg-d	EEQ L	EEQ N	EEQ L
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	8.46E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.57E-02	0.00E+00	0.00E+00	5.12E+00	0.00E+00	3.51E+00	0.00E+00	0.00E+00	0.00E+00	8.65E+00	2.68E+00	3.23E+00	1.33E+01	6.50E-01	0.19%	0.06%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-01	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.41E-04	0.00E+00	0.00E+00	1.45E-01	0.00E+00	5.88E-02	0.00E+00	0.00E+00	0.00E+00	2.04E-01	1.13E-01	1.81E+00	2.64E-01	7.74E-01	0.11%	0.07%
2,3,7,8-TCDD TEQ	1.22E-08	mg/L	8.87E-06	mg/kg	7.33E-05	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	3.66E-09	0.00E+00	1.36E-07	0.00E+00	0.00E+00	7.55E-05	0.00E+00	1.54E-08	0.00E+00	0.00E+00	0.00E+00	7.57E-05	1.00E-06	7.57E+01	1.00E-05	7.57E+00	4.44%	0.71%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	4.91E+02	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	9.11E-01	0.00E+00	0.00E+00	3.04E+02	0.00E+00	7.28E+00	0.00E+00	0.00E+00	0.00E+00	3.12E+02	2.00E-01	1.56E+03	3.00E-01	1.04E+03	91.35%	98.08%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	1.23E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.28E-03	0.00E+00	0.00E+00	7.66E-01	0.00E+00	1.58E-01	0.00E+00	0.00E+00	0.00E+00	9.26E-01	2.00E-01	4.63E+00	1.50E+00	6.17E-01	0.27%	0.06%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	2.40E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.46E-03	0.00E+00	0.00E+00	1.50E+00	0.00E+00	2.64E-01	0.00E+00	0.00E+00	0.00E+00	1.77E+00	2.00E-01	8.83E+00	6.00E-01	2.94E+00	0.52%	0.28%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	6.15E-04	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.14E-06	0.00E+00	0.00E+00	4.43E-04	0.00E+00	2.28E-06	0.00E+00	0.00E+00	0.00E+00	4.46E-04	8.00E-01	5.58E-04	4.00E+00	1.12E-04	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	2.06E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	3.82E-06	0.00E+00	0.00E+00	1.49E-03	0.00E+00	5.92E-05	0.00E+00	0.00E+00	0.00E+00	1.55E-03	8.00E-01	1.94E-03	4.00E+00	3.88E-04	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.85E-04	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	0.00E+00	5.29E-07	0.00E+00	0.00E+00	2.13E-04	0.00E+00	1.06E-06	0.00E+00	0.00E+00	0.00E+00	2.14E-04	8.00E-01	2.68E-04	4.00E+00	5.36E-05	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.90E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	5.38E-07	0.00E+00	0.00E+00	2.12E-04	0.00E+00	5.42E-07	0.00E+00	0.00E+00	0.00E+00	2.13E-04	4.58E+00	4.65E-05	9.16E+00	2.32E-05	0.00%	0.00%
Aluminum	6.11E+00	mg/L	9.69E+03	mg/kg	9.02E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	1.83E+00	0.00E+00	1.67E+01	0.00E+00	0.00E+00	4.94E+01	0.00E+00	9.62E-01	0.00E+00	0.00E+00	0.00E+00	6.89E+01	1.93E+00	3.57E+01	1.93E+01	3.57E+00	2.09%	0.34%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.57E+00	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	4.76E-03	0.00E+00	0.00E+00	1.36E-01	0.00E+00	8.33E-03	0.00E+00	0.00E+00	0.00E+00	1.49E-01	1.25E-01	1.19E+00	1.25E+00	1.19E-01	0.07%	0.01%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.34E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	6.20E-06	0.00E+00	0.00E+00	2.45E-03	0.00E+00	2.53E-05	0.00E+00	0.00E+00	0.00E+00	2.48E-03	6.85E-02	3.62E-02	6.85E-01	3.62E-03	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.80E-01	0.00E+00	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	5.97E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	0.00E+00	1.11E-05	0.00E+00	0.00E+00	4.49E-03	0.00E+00	2.45E-06	0.00E+00	0.00E+00	0.00E+00	4.50E-03	6.80E-02	6.62E-02	6.80E-01	6.62E-03	0.00%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	2.66E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	4.93E-06	0.00E+00	0.00E+00	2.10E-03	0.00E+00	5.60E-07	0.00E+00	0.00E+00	0.00E+00	2.11E-03	6.80E-02	3.10E-02	6.80E-01	3.10E-03	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.80E-01	0.00E+00	0.00%	0.00%
Barium	0.00E+00	mg/L	1.32E+02	mg/kg	1.01E+03	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	0.00E+00	1.87E+00	0.00E+00	0.00E+00	7.50E+00	0.00E+00	4.31E+01	0.00E+00	0.00E+00	0.00E+00	5.25E+01	5.10E+00	1.03E+01	1.98E+01	2.65E+00	0.60%	0.25%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	2.49E-03	mg/L	5.48E-01	mg/kg	5.20E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.25E+01	8.11E-01	8.31E-01	8.31E-01	9.22E-01	9.22E-01	7.46E-04	0.00E+00	9.64E-04	0.00E+00	0.00E+00	5.43E-01	0.00E+00	2.00E-02	0.00E+00	0.00E+00	0.00E+00	5.65E-01	1.00E+00	5.65E-01	1.00E+01	5.65E-02	0.03%	0.01%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.61E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	0.00E+00	0.00E+00	2.98E-02	0.00E+00	0.00E+00	2.35E+00	0.00E+00	3.57E-01	0.00E+00	0.00E+00	0.00E+00	2.74E+00	3.28E+00	8.36E-01	1.31E+01	2.09E-01	0.05%	0.02%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Copper	1.18E-02	mg/L	7.20E+00	mg/kg	1.37E+01	mg/kg	1.00E+00	5.92E+03	5.25E+00	8.28E-01	5.86E-01	3.96E-01	3.96E-01	1.49E-01	1.49E-01	3.54E-03	0.00E+00	2.54E-02	0.00E+00	0.00E+00	5.26E-01	0.00E+00	2.51E-01	0.00E+00	0.00E+00	0.00E+00	8.06E-01	1.17E+01	6.89E-02	1.51E+01	5.32E-02	0.00%	0.01%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-02	0.00E+00	2.00E-01	0.00E+00	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	4.39E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	8.13E-07	0.00E+00	0.00E+00	3.10E-04	0.00E+00	7.77E-07	0.00E+00	0.00E+00	0.00E+00	3.12E-04	9.20E-02	3.39E-03	9.20E-01	3.39E-04	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.10E-01	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.89E-04	0.00E+00	0.00E+00	1.51E-01	0.00E+00	1.83E-04	0.00E+00	0.00E+00	0.00E+00	1.51E-01	8.00E-02	1.89E+00	2.90E-01	5.22E-01	0.11%	0.05%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.64E-03	0.00E+00	0.00E+00	8.42E-01	0.00E+00	5.54E-01	0.00E+00	0.00E+00	0.00E+00	1.40E+00	1.00E+00	1.40E+00	5.00E+00	2.80E-01	0.08%	0.03%
Iron	5.98E+00	mg/L	0.00E+00	mg/kg	1.28E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	1.79E+00	0.00E+00	2.37E+01	0.00E+00	0.00E+00	4.63E+01	0.00E+00	2.37E+00	0.00E+00	0.00E+00	0.00E+00	7.42E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	5.18E-03	mg/L	0.00E+00	mg/kg	7.44E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	3.57E-01	NA	3.97E-02	3.97E-02	1.33E-02	1.33E-02	1.55E-03	0.00E+00	1.38E-01	0.00E+00	0.00E+00	1.23E+00	NA	1.37E-01	0.00E+00	0.00E+00	0.00E+00	1.51E+00	8.00E+00	1.89E-01	8.00E+01	1.89E-02	0.01%	0.00%
Manganese	4.54E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+03	2.10E+00	NA	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	1.36E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E-01	8.80E+01	1.55E-03	2.84E+02	4.80E-04	0.00%	0.00%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E-01	mg/kg	1.00E+00		2.87E+00	4.75E+00	NA	1.02E+00	1.02E+00	1.03E-01	1.03E-01	0.00E+00	0.00E+00	2.04E-04	0.00E+00	0.00E+00	2.42E-02	NA	5.17E-03	0.00E+00	0.00E+00	0.00E+00	2.96E-02	1.32E+01	2.24E-03	3.96E+01	7.46E-04	0.00%	0.00%
Mercury (methyl)	0.00E+00	mg/L	9.58E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.08E+00	NA	NA			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	3.20E-02	0.00E+00	1.60E-01	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.52E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	6.53E-07	0.00E+00	0.00E+00	2.65E-04	0.00E+00	5.61E-07	0.00E+00	0.00E+00	0.00E+00	2.66E-04	7.00E-02	3.80E-03	7.00E-01	3.80E-04	0.00%	0.00%
Nickel	0.00E+00	mg/L	9.33E+00	mg/kg	7.49E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	6.21E-02	6.57E-02	6.57E-02	1.01E-01	1.01E-01	0.00E+00	0.00E+00	1.39E-02	0.00E+00	0.00E+00	1.64E+00	0.00E+00	2.28E-02	0.00E+00	0.00E+00	0.00E+00	1.68E+00	4.00E+01	4.20E-02	8.00E+01	2.10E-02	0.00%	0.00%
Nitrate	8.67E-01	mg/L	1.30E-01	mg/kg	1.08E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	2.60E-01	0.00E+00	1.99E-03	0.00E+00	0.00E+00	5.68E-02	0.00E+00	1.74E-02	0.00E+00	0.00E+00	0.00E+00	3.36E-01	5.07E+02	6.64E-04	1.13E+03	2.98E-04	0.00%	0.00%
Nitrate/Nitrite	7.06E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03								2.12E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.12E-02	5.07E+02	4.18E-05	1.13E+03	1.87E-05	0.00%	0.00%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	3.51E-03	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	6.51E-06	0.00E+00	0.00E+00	2.35E-03	0.00E+00	3.07E-05	0.00E+00	0.00E+00	0.00E+00	2.38E-03	2.10E+00	1.14E-03	6.30E+00	3.79E-04	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	2.98E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	5.52E-07	0.00E+00	0.00E+00	2.10E-04	0.00E+00	4.62E-07	0.00E+00	0.00E+00	0.00E+00	2.11E-04	2.40E-01	8.78E-04	2.40E+00	8.78E-05	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	1.32E-01	mg/kg	1.00E+00			1.14E+00	NA	2.56E+01	2.56E+01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	2.45E-04	0.00E+00	0.00E+00	6.98E-03	NA	1.57E-01	0.00E+00	0.00E+00	0.00E+00	1.64E-01	8.50E+00	1.93E-02	2.55E+01	6.43E-03	0.00%	0.00%
Selenium	0.00E+00	mg/L	8.67E-01	mg/kg	6.76E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.03E+00	4.99E-01	4.87E-01	4.87E-01	1.95E-01	1.95E-01	0.00E+00	0.00E+00	1.25E-03	0.00E+00	0.00E+00	3.23E-02	0.00E+00	1.53E-02	0.00E+00	0.00E+00	0.00E+00	4.88E-02	2.00E-01	2.44E-01	3.30E-01	1.48E-01	0.01%	0.01%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	3.28E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	6.08E-02	0.00E+00	0.00E+00	4.22E-01	0.00E+00	5.32E-01	0.00E+00	0.00E+00	0.00E+00	1.02E+00	2.63E+02	3.86E-03	7.89E+02	1.29E-03	0.00%	0.00%
Sulfate	6.09E+00	mg/L	2.00E+01	mg/kg	1.04E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	1.83E+00	0.00E+00	1.93E-01	0.00E+00	0.00E+00	5.49E+00	0.00E+00	1.69E+00	0.00E+00	0.00E+00	0.00E+00	9.20E+00	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	7.12E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.40E-03	0.00E+00	7.40E-02	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Vanadium	3.33E-02	mg/L	0.00E+00	mg/kg	2.15E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	9.99E-03	0.00E+00	3.98E-02	0.00E+00	0.00E+00	8.75E-02	0.00E+00	3.98E-03	0.00E+00	0.00E+00	0.00E+00	1.41E-01	2.10E-01	6.73E-01	2.10E+00	6.73E-02	0.04%	0.01%
Zinc	0.00E+00	mg/L	3.82E+01	mg/kg	6.24E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.31E+00	9.78E-01	7.87E-01	7.87E-01	4.51E-01	4.51E-01	0.00E+00	0.00E+00	1.16E-01	0.00E+00	0.00E+00	1.54E+01	0.00E+00	2.28E+00	0.00E+00	0.00E+00	0.00E+00	1.78E+01	1.60E+02	1.11E-01	3.20E+02	5.55E-02	0.01%	0.01%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	1.6E+03	1.0E+03	92.14%	98.42%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	4.6E-05	2.3E-05	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	2.8E-03	5.5E-04	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.3E-01	1.3E-02	0.01%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	3.4E-03	3.4E-04	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0.5	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0.5	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	4.08E-05	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.00204	kg/d
Body weight =	0.022	kg
Home range =	0.034595	acres
Water intake rate =	0.0066	L/d
Site Area =	486	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-158
Tier 2 COPCs
EEQs and Hazard Indices for the Deer Mouse at LHAAP
Waste Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
							-----Unitless-----								
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	5.16E+00	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.49E-01	mg/kg	1.00E+00			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01
2,3,7,8-TCDD TEQ	1.07E-08	mg/L	5.59E-06	mg/kg	3.16E-05	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	2.47E+02	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	5.56E-01	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	1.24E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	4.55E-04	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.48E-03	mg/kg	1.00E+00		4.75E+00	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.98E-04	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.37E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Aluminum	4.16E+00	mg/L	8.09E+03	mg/kg	6.95E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.06E+00	mg/kg	1.00E+00			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.22E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.21E-03	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.94E-03	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	5.33E+02	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01
Cadmium	2.09E-03	mg/L	4.57E-01	mg/kg	4.73E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	2.35E+01	8.80E-01	8.67E-01	8.67E-01	6.72E-01	6.72E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.46E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Copper	9.31E-03	mg/L	6.17E+00	mg/kg	1.09E+01	mg/kg	1.00E+00	1.11E+03	1.56E+00	9.82E-01	6.44E-01	4.54E-01	4.54E-01	8.97E-02	8.97E-02
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.17E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.52E-01	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	1.03E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01
Iron	4.18E+00	mg/L	0.00E+00	mg/kg	1.12E+04	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E+01	1.39E+01	1.39E+01		
Lead	4.09E-03	mg/L	0.00E+00	mg/kg	4.77E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	3.89E-01	NA	4.83E-02	4.83E-02	1.16E-02	1.16E-02
Manganese	3.17E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.50E+02	4.20E-01	NA	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	9.02E-02	mg/kg	1.00E+00		1.14E+00	5.42E+00	NA	1.11E+00	1.11E+00	9.15E-02	9.15E-02
Mercury (methyl)	0.00E+00	mg/L	8.35E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	1.15E+00	NA	NA		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.47E-04	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01
Nickel	0.00E+00	mg/L	8.12E+00	mg/kg	7.04E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	6.43E-02	6.67E-02	6.67E-02	8.71E-02	8.71E-02
Nitrate	4.79E-01	mg/L	9.50E-02	mg/kg	6.12E-01	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Nitrate/Nitrite	5.55E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	3.21E-03	mg/kg	1.00E+00			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	2.24E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	9.65E-02	mg/kg	1.00E+00			3.00E-01	NA	2.91E+01	2.91E+01	1.11E-01	1.11E-01
Selenium	0.00E+00	mg/L	7.51E-01	mg/kg	5.98E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.07E+00	4.92E-01	4.81E-01	4.81E-01	1.51E-01	1.51E-01
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.45E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Sulfate	5.14E+00	mg/L	1.39E+01	mg/kg	4.14E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Thallium	0.00E+00	mg/L	6.14E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Vanadium	2.64E-02	mg/L	0.00E+00	mg/kg	1.89E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03
Zinc	0.00E+00	mg/L	3.22E+01	mg/kg	4.92E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	6.23E+00	1.05E+00	8.74E-01	8.74E-01	1.84E-01	1.84E-01

Chemical	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	9.56E-03	0.00E+00	0.00E+00	1.80E+00	0.00E+00	1.34E+00	0.00E+00	0.00E+00	0.00E+00	3.15E+00	2.68E+00	1.18E+00	1.33E+01	2.37E-01	0.24%	0.08%
1,3-Dinitrobenzene	0.00E+00	0.00E+00	2.77E-04	0.00E+00	0.00E+00	5.25E-02	0.00E+00	3.06E-02	0.00E+00	0.00E+00	0.00E+00	8.34E-02	1.13E-01	7.38E-01	2.64E-01	3.16E-01	0.15%	0.10%
2,3,7,8-TCDD TEQ	3.20E-09	0.00E+00	5.87E-08	0.00E+00	0.00E+00	1.62E-05	0.00E+00	5.68E-09	0.00E+00	0.00E+00	0.00E+00	1.62E-05	1.00E-06	1.62E+01	1.00E-05	1.62E+00	3.28%	0.53%
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	4.59E-01	0.00E+00	0.00E+00	8.81E+01	0.00E+00	1.83E+00	0.00E+00	0.00E+00	0.00E+00	9.04E+01	2.00E-01	4.52E+02	3.00E-01	3.01E+02	91.52%	98.08%
2,4-Dinitrotoluene	0.00E+00	0.00E+00	1.03E-03	0.00E+00	0.00E+00	2.00E-01	0.00E+00	5.49E-02	0.00E+00	0.00E+00	0.00E+00	2.56E-01	2.00E-01	1.28E+00	1.50E+00	1.70E-01	0.26%	0.06%
2,6-Dinitrotoluene	0.00E+00	0.00E+00	2.31E-03	0.00E+00	0.00E+00	4.47E-01	0.00E+00	1.23E-01	0.00E+00	0.00E+00	0.00E+00	5.72E-01	2.00E-01	2.86E+00	6.00E-01	9.53E-01	0.58%	0.31%
4,4'-DDD	0.00E+00	0.00E+00	8.45E-07	0.00E+00	0.00E+00	1.89E-04	0.00E+00	5.91E-07	0.00E+00	0.00E+00	0.00E+00	1.90E-04	8.00E-01	2.38E-04	4.00E+00	4.76E-05	0.00%	0.00%
4,4'-DDE	0.00E+00	0.00E+00	2.74E-06	0.00E+00	0.00E+00	6.16E-04	0.00E+00	9.31E-06	0.00E+00	0.00E+00	0.00E+00	6.28E-04	8.00E-01	7.85E-04	4.00E+00	1.57E-04	0.00%	0.00%
4,4'-DDT	0.00E+00	0.00E+00	3.68E-07	0.00E+00	0.00E+00	8.53E-05	0.00E+00	2.58E-07	0.00E+00	0.00E+00	0.00E+00	8.60E-05	8.00E-01	1.07E-04	4.00E+00	2.15E-05	0.00%	0.00%
Aldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
alpha-Chlordane	0.00E+00	0.00E+00	4.39E-07	0.00E+00	0.00E+00	9.98E-05	0.00E+00	1.02E-07	0.00E+00	0.00E+00	0.00E+00	1.00E-04	4.58E+00	2.19E-05	9.16E+00	1.10E-05	0.00%	0.00%
Aluminum	1.25E+00	0.00E+00	1.29E+01	0.00E+00	0.00E+00	1.39E+01	0.00E+00	4.84E-01	0.00E+00	0.00E+00	0.00E+00	2.85E+01	1.93E+00	1.48E+01	1.93E+01	1.48E+00	2.99%	0.48%
Antimony	0.00E+00	0.00E+00	3.82E-03	0.00E+00	0.00E+00	2.87E-02	0.00E+00	3.54E-03	0.00E+00	0.00E+00	0.00E+00	3.60E-02	1.25E-01	2.88E-01	1.25E+00	2.88E-02	0.06%	0.01%
Aroclor 1242	0.00E+00	0.00E+00	4.12E-06	0.00E+00	0.00E+00	9.39E-04	0.00E+00	8.64E-07	0.00E+00	0.00E+00	0.00E+00	9.44E-04	6.85E-02	1.38E-02	6.85E-01	1.38E-03	0.00%	0.00%
Aroclor 1248	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.80E-01	0.00E+00	0.00%	0.00%
Aroclor 1254	0.00E+00	0.00E+00	7.81E-06	0.00E+00	0.00E+00	1.83E-03	0.00E+00	6.98E-07	0.00E+00	0.00E+00	0.00E+00	1.83E-03	6.80E-02	2.70E-02	6.80E-01	2.70E-03	0.01%	0.00%
Aroclor 1260	0.00E+00	0.00E+00	3.60E-06	0.00E+00	0.00E+00	8.84E-04	0.00E+00	5.78E-08	0.00E+00	0.00E+00	0.00E+00	8.87E-04	6.80E-02	1.30E-02	6.80E-01	1.30E-03	0.00%	0.00%
Aroclor 1268	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.80E-01	0.00E+00	0.00%	0.00%
Barium	0.00E+00	0.00E+00	9.89E-01	0.00E+00	0.00E+00	2.25E+00	0.00E+00	3.86E+00	0.00E+00	0.00E+00	0.00E+00	7.09E+00	5.10E+00	1.39E+00	1.98E+01	3.58E-01	0.28%	0.12%
Benzoic Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	6.26E-04	0.00E+00	8.76E-04	0.00E+00	0.00E+00	5.15E-01	0.00E+00	1.90E-02	0.00E+00	0.00E+00	0.00E+00	5.36E-01	1.00E+00	5.36E-01	1.00E+01	5.36E-02	0.11%	0.02%
Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Chromium	0.00E+00	0.00E+00	2.71E-02	0.00E+00	0.00E+00	2.08E-01	0.00E+00	2.78E-02	0.00E+00	0.00E+00	0.00E+00	2.62E-01	3.28E+00	8.00E-02	1.31E+01	2.00E-02	0.02%	0.01%
cis-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Copper	2.79E-03	0.00E+00	2.03E-02	0.00E+00	0.00E+00	4.98E-01	0.00E+00	2.30E-01	0.00E+00	0.00E+00	0.00E+00	7.51E-01	1.17E+01	6.42E-02	1.51E+01	4.96E-02	0.01%	0.02%
Dieldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-02	0.00E+00	2.00E-01	0.00E+00	0.00%	0.00%
Endrin	0.00E+00	0.00E+00	5.88E-07	0.00E+00	0.00E+00	1.29E-04	0.00E+00	4.03E-07	0.00E+00	0.00E+00	0.00E+00	1.30E-04	9.20E-02	1.42E-03	9.20E-01	1.42E-04	0.00%	0.00%
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	0.00E+00	2.82E-04	0.00E+00	0.00E+00	6.31E-02	0.00E+00	1.12E-04	0.00E+00	0.00E+00	0.00E+00	6.35E-02	8.00E-02	7.94E-01	2.90E-01	2.19E-01	0.16%	0.07%
HMX	0.00E+00	0.00E+00	1.91E-03	0.00E+00	0.00E+00	3.52E-01	0.00E+00	4.01E-01	0.00E+00	0.00E+00	0.00E+00	7.55E-01	1.00E+00	7.55E-01	5.00E+00	1.51E-01	0.15%	0.05%
Iron	1.25E+00	0.00E+00	2.08E+01	0.00E+00	0.00E+00	1.87E+01	0.00E+00	2.08E+00	0.00E+00	0.00E+00	0.00E+00	4.28E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	1.23E-03	0.00E+00	8.84E-02	0.00E+00	0.00E+00	8.60E-01	NA	1.07E-01	0.00E+00	0.00E+00	0.00E+00	1.06E+00	8.00E+00	1.32E-01	8.00E+01	1.32E-02	0.03%	0.00%
Manganese	9.50E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.50E-02	8.80E+01	1.08E-03	2.84E+02	3.35E-04	0.00%	0.00%
Mercury (inorganic)	0.00E+00	0.00E+00	1.67E-04	0.00E+00	0.00E+00	2.27E-02	NA	4.65E-03	0.00E+00	0.00E+00	0.00E+00	2.75E-02	1.32E+01	2.08E-03	3.96E+01	6.94E-04	0.00%	0.00%
Mercury (methyl)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	3.20E-02	0.00E+00	1.60E-01	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	0.00E+00	4.58E-07	0.00E+00	0.00E+00	1.07E-04	0.00E+00	3.94E-08	0.00E+00	0.00E+00	0.00E+00	1.08E-04	7.00E-02	1.54E-03	7.00E-01	1.54E-04	0.00%	0.00%
Nickel	0.00E+00	0.00E+00	1.31E-02	0.00E+00	0.00E+00	3.46E-01	0.00E+00	2.18E-02	0.00E+00	0.00E+00	0.00E+00	3.81E-01	4.00E+01	9.52E-03	8.00E+01	4.76E-03	0.00%	0.00%
Nitrate	1.44E-01	0.00E+00	1.14E-03	0.00E+00	0.00E+00	8.52E-03	0.00E+00	5.96E-03	0.00E+00	0.00E+00	0.00E+00	1.59E-01	5.07E+02	3.14E-04	1.13E+03	1.41E-04	0.00%	0.00%
Nitrate/Nitrite	1.67E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.67E-02	5.07E+02	3.28E-05	1.13E+03	1.47E-05	0.00%	0.00%
Oxychlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	0.00E+00	5.94E-06	0.00E+00	0.00E+00	1.24E-03	0.00E+00	2.46E-05	0.00E+00	0.00E+00	0.00E+00	1.27E-03	2.10E+00	6.03E-04	6.30E+00	2.01E-04	0.00%	0.00%
Pentachloroanisole	0.00E+00	0.00E+00	4.16E-07	0.00E+00	0.00E+00	9.11E-05	0.00E+00	2.85E-07	0.00E+00	0.00E+00	0.00E+00	9.18E-05	2.40E-01	3.82E-04	2.40E+00	3.82E-05	0.00%	0.00%
Pentachlorophenol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	0.00E+00	1.79E-04	0.00E+00	0.00E+00	1.34E-03	NA	1.30E-01	0.00E+00	0.00E+00	0.00E+00	1.32E-01	8.50E+00	1.55E-02	2.55E+01	5.17E-03	0.00%	0.00%
Selenium	0.00E+00	0.00E+00	1.11E-03	0.00E+00	0.00E+00	2.96E-02	0.00E+00	1.34E-02	0.00E+00	0.00E+00	0.00E+00	4.40E-02	2.00E-01	2.20E-01	3.30E-01	1.33E-01	0.04%	0.04%
Silver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	0.00E+00	4.54E-02	0.00E+00	0.00E+00	9.88E-02	0.00E+00	2.39E-01	0.00E+00	0.00E+00	0.00E+00	3.83E-01	2.63E+02	1.46E-03	7.89E+02	4.85E-04	0.00%	0.00%
Sulfate	1.54E+00	0.00E+00	7.68E-02	0.00E+00	0.00E+00	5.76E-01	0.00E+00	4.03E-01	0.00E+00	0.00E+00	0.00E+00	2.60E+00	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.40E-03	0.00E+00	7.40E-02	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Vanadium	7.92E-03	0.00E+00	3.51E-02	0.00E+00	0.00E+00	3.68E-02	0.00E+00	3.16E-03	0.00E+00	0.00E+00	0.00E+00	8.30E-02	2.10E-01	3.95E-01	2.10E+00	3.95E-02	0.08%	0.01%
Zinc	0.00E+00	0.00E+00	9.13E-02	0.00E+00	0.00E+00	1.42E+01	0.00E+00	1.99E+00	0.00E+00	0.00E+00	0.00E+00	1.63E+01	1.60E+02	1.02E-01	3.20E+02	5.09E-02	0.02%	0.02%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	4.6E+02	3.0E+02	92.36%	98.44%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	2.2E-05	1.1E-05	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	1.1E-03	2.3E-04	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	5.4E-02	5.4E-03	0.01%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	1.4E-03	1.4E-04	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi \, x \, Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0.5	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0.5	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	4.08E-05	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.00204	kg/d
Body weight =	0.022	kg
Home range =	0.145792	acres
Water intake rate =	0.0066	L/d
Site Area =	486	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-159
Tier 1 COPCs
EEQs and Hazard Indices for the Raccoon at LHAAP
Waste Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							---Unitless---									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	8.46E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.00E-02	0.00E+00	0.00E+00	8.31E-01	0.00E+00	2.28E+00	0.00E+00	2.45E-02	0.00E+00	3.16E+00	2.68E+00	1.18E+00	1.33E+01	2.37E-01	0.23%	0.11%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-01	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	5.61E-04	0.00E+00	0.00E+00	2.35E-02	0.00E+00	3.82E-02	0.00E+00	6.88E-04	0.00E+00	6.30E-02	1.13E-01	5.57E-01	2.64E-01	2.39E-01	0.11%	0.11%
2,3,7,8-TCDD TEQ	1.22E-08	mg/L	8.87E-06	mg/kg	7.33E-05	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	1.00E-09	2.09E-08	1.73E-07	5.20E-06	1.46E-06	1.23E-05	0.00E+00	1.00E-08	0.00E+00	1.12E-08	0.00E+00	1.91E-05	1.00E-06	1.91E+01	1.00E-05	1.91E+00	3.69%	0.89%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	4.91E+02	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.16E+00	0.00E+00	0.00E+00	4.93E+01	0.00E+00	4.73E+00	0.00E+00	1.42E+00	0.00E+00	5.66E+01	2.00E-01	2.83E+02	3.00E-01	1.89E+02	54.57%	87.91%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	1.23E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.90E-03	0.00E+00	0.00E+00	1.24E-01	0.00E+00	1.03E-01	0.00E+00	3.55E-03	0.00E+00	2.33E-01	2.00E-01	1.17E+00	1.50E+00	1.56E-01	0.23%	0.07%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	2.40E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	5.67E-03	0.00E+00	0.00E+00	2.43E-01	0.00E+00	1.71E-01	0.00E+00	6.95E-03	0.00E+00	4.27E-01	2.00E-01	2.13E+00	6.00E-01	7.12E-01	0.41%	0.33%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	6.15E-04	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.45E-06	0.00E+00	0.00E+00	7.19E-05	0.00E+00	1.48E-06	0.00E+00	1.78E-06	0.00E+00	7.66E-05	8.00E-01	9.57E-05	4.00E+00	1.91E-05	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	2.06E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	4.85E-06	0.00E+00	0.00E+00	2.42E-04	0.00E+00	3.84E-05	0.00E+00	5.13E-06	0.00E+00	2.90E-04	8.00E-01	3.63E-04	4.00E+00	7.25E-05	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.85E-04	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	0.00E+00	6.73E-07	0.00E+00	0.00E+00	3.46E-05	0.00E+00	6.87E-07	0.00E+00	1.19E-06	0.00E+00	3.71E-05	8.00E-01	4.64E-05	4.00E+00	9.28E-06	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.90E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	6.83E-07	0.00E+00	0.00E+00	3.44E-05	0.00E+00	3.52E-07	0.00E+00	8.38E-07	0.00E+00	3.63E-05	4.58E+00	7.92E-06	9.16E+00	3.96E-06	0.00%	0.00%
Aluminum	6.11E+00	mg/L	9.69E+03	mg/kg	9.02E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	5.03E-01	2.29E+01	2.13E+01	6.59E-02	3.28E+02	8.01E+00	0.00E+00	6.25E-01	0.00E+00	1.96E-01	0.00E+00	3.82E+02	1.93E+00	1.98E+02	1.93E+01	1.98E+01	38.16%	9.22%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.57E+00	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	6.05E-03	0.00E+00	0.00E+00	2.20E-02	0.00E+00	5.41E-03	0.00E+00	1.07E-03	0.00E+00	3.45E-02	1.25E-01	2.76E-01	1.25E+00	2.76E-02	0.05%	0.01%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.34E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	7.88E-06	0.00E+00	0.00E+00	3.98E-04	0.00E+00	1.64E-05	0.00E+00	9.66E-06	0.00E+00	4.32E-04	6.85E-02	6.30E-03	6.85E-01	6.30E-04	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.90E-01	0.00E+00	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	5.97E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	0.00E+00	1.41E-05	0.00E+00	0.00E+00	7.29E-04	0.00E+00	1.59E-06	0.00E+00	1.59E-05	0.00E+00	7.60E-04	6.80E-02	1.12E-02	6.90E-01	1.10E-03	0.00%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	2.66E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	6.27E-06	0.00E+00	0.00E+00	3.41E-04	0.00E+00	3.64E-07	0.00E+00	1.28E-05	0.00E+00	3.60E-04	6.80E-02	5.30E-03	6.90E-01	5.22E-04	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.90E-01	0.00E+00	0.00%	0.00%
Barium	0.00E+00	mg/L	1.32E+02	mg/kg	1.01E+03	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	3.12E-01	2.38E+00	0.00E+00	4.48E+00	1.22E+00	0.00E+00	2.80E+01	0.00E+00	8.40E-02	0.00E+00	3.65E+01	5.10E+00	7.15E+00	1.98E+01	1.84E+00	1.38%	0.86%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	2.49E-03	mg/L	5.48E-01	mg/kg	5.20E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.25E+01	8.11E-01	8.31E-01	8.31E-01	9.22E-01	9.22E-01	2.05E-04	1.29E-03	1.23E-03	1.02E-02	3.29E-02	8.81E-02	0.00E+00	1.30E-02	0.00E+00	1.20E-03	0.00E+00	1.48E-01	1.00E+00	1.48E-01	1.00E+01	1.48E-02	0.03%	0.01%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.61E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	0.00E+00	0.00E+00	3.79E-02	0.00E+00	0.00E+00	3.82E-01	0.00E+00	2.32E-01	0.00E+00	1.34E-02	0.00E+00	6.66E-01	3.28E+00	2.03E-01	1.31E+01	5.06E-02	0.04%	0.02%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Copper	1.18E-02	mg/L	7.20E+00	mg/kg	1.37E+01	mg/kg	1.00E+00	5.92E+03	5.25E+00	8.28E-01	5.86E-01	3.96E-01	3.96E-01	1.49E-01	1.49E-01	9.72E-04	1.70E-02	3.23E-02	1.75E-01	2.84E-01	8.53E-02	0.00E+00	1.63E-01	0.00E+00	5.13E-03	0.00E+00	7.64E-01	1.17E+01	6.53E-02	1.51E+01	5.04E-02	0.01%	0.02%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-02	0.00E+00	2.00E-01	0.00E+00	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	4.39E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	1.03E-06	0.00E+00	0.00E+00	5.04E-05	0.00E+00	5.05E-07	0.00E+00	1.34E-06	0.00E+00	5.33E-05	9.20E-02	5.79E-04	9.20E-01	5.79E-05	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.10E-01	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.94E-04	0.00E+00	0.00E+00	2.45E-02	0.00E+00	1.19E-04	0.00E+00	6.06E-04	0.00E+00	2.57E-02	8.00E-02	3.21E-01	2.90E-01	8.86E-02	0.06%	0.04%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.36E-03	0.00E+00	0.00E+00	1.37E-01	0.00E+00	3.60E-01	0.00E+00	4.12E-03	0.00E+00	5.04E-01	1.00E+00	5.04E-01	5.00E+00	1.01E-01	0.10%	0.05%
Iron	5.98E+00	mg/L	0.00E+00	mg/kg	1.28E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	4.92E-01	0.00E+00	3.02E+01	1.50E+01	0.00E+00	7.51E+00	0.00E+00	1.54E+00	0.00E+00	6.64E-02	0.00E+00	5.48E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	1.44E-04	0.00E+00	0.00E+00	1.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.02E-02	NA	NA	NA	NA	NA	NA
Lead	5.18E-03	mg/L	0.00E+00	mg/kg	7.44E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	3.57E-01	NA	3.97E-02	3.97E-02	1.33E-02	1.33E-02	4.27E-04	0.00E+00	1.75E-01	1.95E-02	0.00E+00	2.00E-01	NA	8.89E-02	0.00E+00	2.48E-03	0.00E+00	4.87E-01	8.00E+00	6.09E-02	8.00E+01	6.09E-03	0.01%	0.00%
Manganese	4.54E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+03	2.10E+00	NA	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	3.74E-02	0.00E+00	0.00E+00	2.28E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.32E+00	8.80E+01	2.63E-02	2.84E+02	8.16E-03	0.01%	0.00%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E-01	mg/kg	1.00E+00		2.87E+00	4.75E+00	NA	1.02E+00	1.02E+00	1.03E-01	1.03E-01	0.00E+00	0.00E+00	2.59E-04	0.00E+00	0.00E+00	3.92E-03	NA	3.36E-03	0.00E+00	2.84E-05	0.00E+00	7.57E-03	1.00E+00	7.57E-03	3.00E+00	2.52E-03	0.00%	0.00%
Mercury (methyl)	0.00E+00	mg/L	9.58E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.08E+00	NA	NA			0.00E+00	2.26E-04	0.00E+00	0.00E+00	2.07E-03	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	2.29E-03	1.50E-02	1.53E-01	2.50E-02	9.17E-02	0.03%	0.04%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.52E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	8.30E-07	0.00E+00	0.00E+00	4.30E-05	0.00E+00	3.64E-07	0.00E+00	1.02E-06	0.00E+00	4.52E-05	7.00E-02	6.46E-04	7.00E-01	6.46E-05	0.00%	0.00%
Nickel	0.00E+00	mg/L	9.33E+00	mg/kg	7.49E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	6.21E-02	6.57E-02	6.57E-02	1.01E-01	1.01E-01	0.00E+00	2.20E-02	1.77E-02	0.00E+00	1.63E-01	2.66E-01	0.00E+00	1.48E-02	0.00E+00	1.90E-03	0.00E+00	4.86E-01	4.00E+01	1.21E-02	8.00E+01	6.07E-03	0.00%	0.00%
Nitrate	8.67E-01	mg/L	1.30E-01	mg/kg	1.08E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	7.14E-02	3.06E-04	2.54E-03	2.32E+00	2.05E-03	9.22E-03	0.00E+00	1.13E-02	0.00E+00	4.48E-04	0.00E+00	2.42E+00	5.07E+02	4.77E-03	1.13E+03	2.14E-03	0.00%	0.00%
Nitrate/Nitrite	7.06E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03								5.82E-03	0.00E+00	0.00E+00	1.89E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.95E-01	5.07E+02	3.85E-04	1.13E+03	1.73E-04	0.00%	0.00%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	3.51E-03	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	8.28E-06	0.00E+00	0.00E+00	3.81E-04	0.00E+00	1.99E-05	0.00E+00	1.01E-05	0.00E+00	4.19E-04	2.10E+00	2.00E-04	6.30E+00	6.66E-05	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	2.98E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	7.02E-07	0.00E+00	0.00E+00	3.40E-05	0.00E+00	3.00E-07	0.00E+00	8.61E-07	0.00E+00	3.59E-05	2.40E-01	1.50E-04	2.40E+00	1.50E-05	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	1.32E-01	mg/kg	1.00E+00			1.14E+00	NA	2.56E+01	2.56E+01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	3.11E-04	0.00E+00	0.00E+00	1.13E-03	NA	1.02E-01	0.00E+00	5.51E-05	0.00E+00	1.03E-01	8.50E+00	1.21E-02	2.55E+01	4.05E-03	0.00%	0.00%
Selenium	0.00E+00	mg/L	8.67E-01	mg/kg	6.76E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.03E+00	4.99E-01	4.87E-01	4.87E-01	1.95E-01	1.95E-01	0.00E+00	2.04E-03	1.59E-03	0.00E+00	2.93E-02	5.24E-03	0.00E+00	9.91E-03	0.00E+00	3.31E-04	0.00E+00	4.85E-02	2.00E-01	2.42E-01	3.30E-01	1.47E-01	0.05%	0.07%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	3.28E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	7.73E-02	0.00E+00	0.00E+00	6.86E-02	0.00E+00	3.45E-01	0.00E+00	1.37E-02	0.00E+00	5.05E-01	2.63E+02	1.92E-03	7.89E+02	6.40E-04	0.00%	0.00%
Sulfate	6.09E+00	mg/L	2.00E+01	mg/kg	1.04E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	5.02E-01	4.71E-02	2.45E-01	1.63E+01	3.15E-01	8.92E-01	0.00E+00	1.10E+00	0.00E+00	4.33E-02	0.00E+00	1.95E+01	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	7.12E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00							0.00E+00	1.68E-03	0.00E+00	0.00E+00	2.41E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.58E-02	7.40E-03	3.48E+00	7.40E-02	3.48E-01	0.67%	0.16%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Vanadium	3.33E-02	mg/L	0.00E+00	mg/kg	2.15E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	2.74E-03	0.00E+00	5.06E-02	8.92E-02	0.00E+00	1.42E-02	0.00E+00	2.58E-03	0.00E+00	3.19E-04	0.00E+00	1.60E-01	2.10E-01	7.60E-01	2.10E+00	7.60E-02	0.15%	0.04%
Zinc	0.00E+00	mg/L	3.82E+01	mg/kg	6.24E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.31E+00	9.78E-01	7.87E-01	7.87E-01	4.51E-01	4.51E-01	0.00E+00	9.00E-02	1.47E-01	0.00E+00	2.16E+00	2.50E+00	0.00E+00	1.48E+00	0.00E+00	7.06E-02	0.00E+00	6.45E+00	1.60E+02	4.03E-02	3.20E+02	2.01E-02	0.01%	0.01%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	2.9E+02	1.9E+02	55.21%	88.32%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	7.9E-06	4.0E-06	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	5.0E-04	1.0E-04	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	2.3E-02	2.3E-03	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	5.8E-04	5.8E-05	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi x Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0.6	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.05	unitless
Aq. Invert diet fraction =	0.15	unitless
Terr. Invert diet fraction =	0.15	unitless
Mammal diet fraction =	0.05	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.01363	kg/d
Sediment ingestion rate =	0.01363	kg/d
Food ingestion rate =	0.29	kg/d
Body weight =	5.78	kg
Home range =	13.09653	acres
Water intake rate =	0.476	L/d
Site Area =	486	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-160
Tier 2 COPCs
EEQs and Hazard Indices for the Raccoon at LHAAP
Waste Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							---Unitless---									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	5.16E+00	mg/kg	#######			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	9.27E-03	0.00E+00	0.00E+00	2.23E-01	0.00E+00	6.65E-01	0.00E+00	8.64E-03	0.00E+00	9.06E-01	2.68E+00	3.38E-01	1.33E+01	6.81E-02	0.17%	0.12%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.49E-01	mg/kg	#######			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.68E-04	0.00E+00	0.00E+00	6.49E-03	0.00E+00	1.52E-02	0.00E+00	2.50E-04	0.00E+00	2.22E-02	1.13E-01	1.96E-01	2.64E-01	8.40E-02	0.10%	0.15%
2,3,7,8-TCDD TEQ	1.07E-08	mg/L	5.59E-06	mg/kg	3.16E-05	mg/kg	#######	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	6.70E-10	1.00E-08	5.69E-08	4.71E-07	1.50E-07	2.00E-06	0.00E+00	2.81E-09	0.00E+00	2.86E-09	0.00E+00	2.69E-06	1.00E-06	2.69E+00	1.00E-05	2.69E-01	1.38%	0.48%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	2.47E+02	mg/kg	#######			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.44E-01	0.00E+00	0.00E+00	1.09E+01	0.00E+00	9.05E-01	0.00E+00	4.14E-01	0.00E+00	1.27E+01	2.00E-01	6.33E+01	3.00E-01	4.22E+01	32.40%	75.31%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	5.56E-01	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.00E-03	0.00E+00	0.00E+00	2.47E-02	0.00E+00	2.72E-02	0.00E+00	9.32E-04	0.00E+00	5.38E-02	2.00E-01	2.69E-01	1.50E+00	3.59E-02	0.14%	0.06%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	1.24E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.24E-03	0.00E+00	0.00E+00	5.53E-02	0.00E+00	6.08E-02	0.00E+00	2.08E-03	0.00E+00	1.20E-01	2.00E-01	6.02E-01	6.00E-01	2.01E-01	0.31%	0.36%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	4.55E-04	mg/kg	#######		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	8.19E-07	0.00E+00	0.00E+00	2.34E-05	0.00E+00	2.93E-07	0.00E+00	7.63E-07	0.00E+00	2.53E-05	8.00E-01	3.16E-05	4.00E+00	6.31E-06	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.48E-03	mg/kg	#######		4.75E+00	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	2.65E-06	0.00E+00	0.00E+00	7.62E-05	0.00E+00	4.61E-06	0.00E+00	2.66E-06	0.00E+00	8.61E-05	8.00E-01	1.08E-04	4.00E+00	2.15E-05	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.98E-04	mg/kg	#######		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	3.57E-07	0.00E+00	0.00E+00	1.06E-05	0.00E+00	1.27E-07	0.00E+00	3.37E-07	0.00E+00	1.14E-05	8.00E-01	1.42E-05	4.00E+00	2.85E-06	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.37E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.26E-07	0.00E+00	0.00E+00	1.23E-05	0.00E+00	5.07E-08	0.00E+00	3.97E-07	0.00E+00	1.32E-05	4.58E+00	2.89E-06	9.16E+00	1.44E-06	0.00%	0.00%
Aluminum	4.16E+00	mg/L	8.09E+03	mg/kg	6.95E+03	mg/kg	#######	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	2.61E-01	1.45E+01	1.25E+01	3.42E-02	2.09E+02	1.72E+00	0.00E+00	2.39E-01	0.00E+00	8.81E-02	0.00E+00	2.38E+02	1.93E+00	1.23E+02	1.93E+01	1.23E+01	63.13%	22.01%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.06E+00	mg/kg	#######			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	3.71E-03	0.00E+00	0.00E+00	3.55E-03	0.00E+00	1.75E-03	0.00E+00	4.37E-04	0.00E+00	9.44E-03	1.25E-01	7.55E-02	1.25E+00	7.55E-03	0.04%	0.01%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.22E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.99E-06	0.00E+00	0.00E+00	1.16E-04	0.00E+00	4.28E-07	0.00E+00	3.72E-06	0.00E+00	1.24E-04	6.85E-02	1.82E-03	6.85E-01	1.82E-04	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.90E-01	0.00E+00	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.21E-03	mg/kg	#######		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	7.57E-06	0.00E+00	0.00E+00	2.26E-04	0.00E+00	3.46E-07	0.00E+00	4.01E-06	0.00E+00	2.38E-04	6.80E-02	3.50E-03	6.90E-01	3.45E-04	0.00%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.94E-03	mg/kg	#######			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	3.49E-06	0.00E+00	0.00E+00	1.09E-04	0.00E+00	2.86E-08	0.00E+00	6.19E-06	0.00E+00	1.19E-04	6.80E-02	1.75E-03	6.90E-01	1.73E-04	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.90E-01	0.00E+00	0.00%	0.00%
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	5.33E+02	mg/kg	#######	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	2.12E-01	9.58E-01	0.00E+00	3.05E+00	2.78E-01	0.00E+00	1.91E+00	0.00E+00	2.04E-02	0.00E+00	6.43E+00	5.10E+00	1.26E+00	1.98E+01	3.25E-01	0.64%	0.58%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	2.09E-03	mg/L	4.57E-01	mg/kg	4.73E-01	mg/kg	#######	1.15E+03	6.00E-01	2.35E+01	8.80E-01	8.67E-01	8.67E-01	6.72E-01	6.72E-01	1.31E-04	8.22E-04	8.49E-04	4.58E-03	1.57E-03	6.37E-02	0.00E+00	9.40E-03	0.00E+00	6.08E-04	0.00E+00	8.17E-02	1.00E+00	8.17E-02	1.00E+01	8.17E-03	0.04%	0.01%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.46E+01	mg/kg	#######	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	0.00E+00	0.00E+00	2.63E-02	0.00E+00	0.00E+00	2.57E-02	0.00E+00	1.38E-02	0.00E+00	2.37E-03	0.00E+00	6.81E-02	3.28E+00	2.08E-02	1.31E+01	5.18E-03	0.01%	0.01%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Copper	9.31E-03	mg/L	6.17E+00	mg/kg	1.09E+01	mg/kg	#######	1.11E+03	1.56E+00	9.82E-01	6.44E-01	4.54E-01	4.54E-01	8.97E-02	8.97E-02	5.85E-04	1.11E-02	1.97E-02	1.98E-02	5.52E-02	6.16E-02	0.00E+00	1.14E-01	0.00E+00	1.88E-03	0.00E+00	2.84E-01	1.17E+01	2.43E-02	1.51E+01	1.87E-02	0.01%	0.03%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-02	0.00E+00	2.00E-01	0.00E+00	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.17E-04	mg/kg	#######			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	5.70E-07	0.00E+00	0.00E+00	1.60E-05	0.00E+00	1.99E-07	0.00E+00	7.36E-07	0.00E+00	1.75E-05	9.20E-02	1.90E-04	9.20E-01	1.90E-05	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.52E-01	mg/kg	#######			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.74E-04	0.00E+00	0.00E+00	7.81E-03	0.00E+00	5.55E-05	0.00E+00	2.55E-04	0.00E+00	8.40E-03	8.00E-02	1.05E-01	2.90E-01	2.89E-02	0.05%	0.05%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	1.03E+00	mg/kg	#######			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.86E-03	0.00E+00	0.00E+00	4.35E-02	0.00E+00	1.99E-01	0.00E+00	1.73E-03	0.00E+00	2.46E-01	1.00E+00	2.46E-01	5.00E+00	4.91E-02	0.13%	0.09%
Iron	4.18E+00	mg/L	0.00E+00	mg/kg	1.12E+04	mg/kg	#######	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	2.62E-01	0.00E+00	2.01E+01	2.00E+00	0.00E+00	2.31E+00	0.00E+00	1.03E+00	0.00E+00	3.76E-02	0.00E+00	2.57E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	#######		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	1.10E-04	0.00E+00	0.00E+00	1.63E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E-03	NA	NA	NA	NA	NA	NA
Lead	4.09E-03	mg/L	0.00E+00	mg/kg	4.77E+01	mg/kg	#######	4.48E+02	7.10E-02	3.89E-01	NA	4.83E-02	4.83E-02	1.16E-02	1.16E-02	2.57E-04	0.00E+00	8.57E-02	3.50E-03	0.00E+00	1.06E-01	NA	5.28E-02	0.00E+00	1.06E-03	0.00E+00	2.50E-01	8.00E+00	3.12E-02	8.00E+01	3.12E-03	0.02%	0.01%
Manganese	3.17E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	2.50E+02	4.20E-01	NA	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	1.99E-02	0.00E+00	0.00E+00	1.51E-01	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.71E-01	8.80E+01	1.95E-03	2.84E+02	6.03E-04	0.00%	0.00%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	9.02E-02	mg/kg	#######		1.14E+00	5.42E+00	NA	1.11E+00	1.11E+00	9.15E-02	9.15E-02	0.00E+00	0.00E+00	1.62E-04	0.00E+00	0.00E+00	2.80E-03	NA	2.30E-03	0.00E+00	1.58E-05	0.00E+00	5.28E-03	1.00E+00	5.28E-03	3.00E+00	1.76E-03	0.00%	0.00%
Mercury (methyl)	0.00E+00	mg/L	8.35E-02	mg/kg	0.00E+00	mg/kg	#######		1.14E+00	NA	1.15E+00	NA	NA			0.00E+00	1.50E-04	0.00E+00	0.00E+00	5.44E-04	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	6.94E-04	1.50E-02	4.63E-02	2.50E-02	2.78E-02	0.02%	0.05%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.47E-04	mg/kg	#######			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.44E-07	0.00E+00	0.00E+00	1.33E-05	0.00E+00	1.95E-08	0.00E+00	4.14E-07	0.00E+00	1.42E-05	7.00E-02	2.02E-04	7.00E-01	2.02E-05	0.00%	0.00%
Nickel	0.00E+00	mg/L	8.12E+00	mg/kg	7.04E+00	mg/kg	#######		4.86E-01	1.06E+00	6.43E-02	6.67E-02	6.67E-02	8.71E-02	8.71E-02	0.00E+00	1.46E-02	1.27E-02	0.00E+00	2.26E-02	4.28E-02	0.00E+00	1.08E-02	0.00E+00	1.17E-03	0.00E+00	1.05E-01	4.00E+01	2.62E-03	8.00E+01	1.31E-03	0.00%	0.00%
Nitrate	4.79E-01	mg/L	9.50E-02	mg/kg	6.12E-01	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	3.01E-02	1.71E-04	1.10E-03	2.76E-01	2.29E-04	1.05E-03	0.00E+00	2.95E-03	0.00E+00	1.30E-04	0.00E+00	3.11E-01	5.07E+02	6.14E-04	1.13E+03	2.75E-04	0.00%	0.00%
Nitrate/Nitrite	5.55E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	3.01E+02								3.48E-03	0.00E+00	0.00E+00	3.19E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-02	5.07E+02	6.99E-05	1.13E+03	3.13E-05	0.00%	0.00%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	3.21E-03	mg/kg	#######			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	5.76E-06	0.00E+00	0.00E+00	1.53E-04	0.00E+00	1.22E-05	0.00E+00	5.37E-06	0.00E+00	1.76E-04	2.10E+00	8.39E-05	6.30E+00	2.80E-05	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	2.24E-04	mg/kg	#######			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.03E-07	0.00E+00	0.00E+00	1.13E-05	0.00E+00	1.41E-07	0.00E+00	3.76E-07	0.00E+00	1.22E-05	2.40E-01	5.08E-05	2.40E+00	5.08E-06	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	9.65E-02	mg/kg	#######			3.00E-01	NA	2.91E+01	2.91E+01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	1.74E-04	0.00E+00	0.00E+00	1.66E-04	NA	6.45E-02	0.00E+00	2.04E-05	0.00E+00	6.48E-02	8.50E+00	7.63E-03	2.55E+01	2.54E-03	0.00%	0.00%
Selenium	0.00E+00	mg/L	7.51E-01	mg/kg	5.98E-01	mg/kg	#######	2.05E+02	4.50E+00	1.07E+00	4.92E-01	4.81E-01	4.81E-01	1.51E-01	1.51E-01	0.00E+00	1.35E-03	1.08E-03	0.00E+00	1.94E-02	3.66E-03	0.00E+00	6.61E-03	0.00E+00	1.73E-04	0.00E+00	3.22E-02	2.00E-01	1.61E-01	3.30E-01	9.77E-02	0.08%	0.17%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.45E+01	mg/kg	#######		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	4.40E-02	0.00E+00	0.00E+00	1.22E-02	0.00E+00	1.18E-01	0.00E+00	5.19E-03	0.00E+00	1.80E-01	2.63E+02	6.83E-04	7.89E+02	2.28E-04	0.00%	0.00%
Sulfate	5.14E+00	mg/L	1.39E+01	mg/kg	4.14E+01	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	3.22E-01	2.50E-02	7.45E-02	2.95E+00	3.35E-02	7.13E-02	0.00E+00	2.00E-01	0.00E+00	8.78E-03	0.00E+00	3.69E+00	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	6.14E-01	mg/kg	0.00E+00	mg/kg	#######	7.50E+01	4.50E+00							0.00E+00	1.10E-03	0.00E+00	0.00E+00	1.58E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.69E-02	7.40E-03	2.29E+00	7.40E-02	2.29E-01	1.17%	0.41%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Vanadium	2.64E-02	mg/L	0.00E+00	mg/kg	1.89E+01	mg/kg	#######	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	1.66E-03	0.00E+00	3.40E-02	1.52E-02	0.00E+00	4.56E-03	0.00E+00	1.56E-03	0.00E+00	1.98E-04	0.00E+00	5.72E-02	2.10E-01	2.72E-01	2.10E+00	2.72E-02	0.14%	0.05%
Zinc	0.00E+00	mg/L	3.22E+01	mg/kg	4.92E+01	mg/kg	#######	2.91E+03	1.94E+00	6.23E+00	1.05E+00	8.74E-01	8.74E-01	1.84E-01	1.84E-01	0.00E+00	5.79E-02	8.85E-02	0.00E+00	3.58E-01	1.76E+00	0.00E+00	9.87E-01	0.00E+00	1.73E-02	0.00E+00	3.27E+00	1.60E+02	2.04E-02	3.20E+02	1.02E-02	0.01%	0.02%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	6.4E+01	4.2E+01	32.84%	75.73%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	2.9E-06	1.4E-06	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	1.5E-04	3.1E-05	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	7.1E-03	7.0E-04	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	1.9E-04	1.9E-05	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\,x\,Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0.6	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.05	unitless
Aq. Invert diet fraction =	0.15	unitless
Terr. Invert diet fraction =	0.15	unitless
Mammal diet fraction =	0.05	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.01363	kg/d
Sediment ingestion rate =	0.01363	kg/d
Food ingestion rate =	0.29	kg/d
Body weight =	5.78	kg
Home range =	637.5293	acres
Water intake rate =	0.476	L/d
Site Area =	486	acres
Area Use Factor (AUF) =	0.762318	unitless
Exposure Duration (ED) =	1	unitless

Table E-161
Tier 1 COPCs
EEQs and Hazard Indices for the Raccoon-Louisiana Black Bear at LHAAP
Waste Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							---Unitless---									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	8.46E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	8.47E-04	0.00E+00	0.00E+00	1.18E-01	0.00E+00	3.25E-01	0.00E+00	3.49E-03	0.00E+00	4.48E-01	2.68E+00	1.67E-01	1.33E+01	3.37E-02	0.24%	0.11%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-01	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.38E-05	0.00E+00	0.00E+00	3.36E-03	0.00E+00	5.44E-03	0.00E+00	9.80E-05	0.00E+00	8.92E-03	1.13E-01	7.89E-02	2.64E-01	3.38E-02	0.11%	0.11%
2,3,7,8-TCDD TEQ	1.22E-08	mg/L	8.87E-06	mg/kg	7.33E-05	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	2.43E-10	8.88E-10	7.34E-09	7.41E-07	2.08E-07	1.75E-06	0.00E+00	1.43E-09	0.00E+00	1.60E-09	0.00E+00	2.71E-06	1.00E-06	2.71E+00	1.00E-05	2.71E-01	3.82%	0.90%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	4.91E+02	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.91E-02	0.00E+00	0.00E+00	7.02E+00	0.00E+00	6.74E-01	0.00E+00	2.02E-01	0.00E+00	7.95E+00	2.00E-01	3.97E+01	3.00E-01	2.65E+01	56.05%	88.50%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	1.23E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.23E-04	0.00E+00	0.00E+00	1.77E-02	0.00E+00	1.46E-02	0.00E+00	5.06E-04	0.00E+00	3.30E-02	2.00E-01	1.65E-01	1.50E+00	2.20E-02	0.23%	0.07%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	2.40E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.41E-04	0.00E+00	0.00E+00	3.46E-02	0.00E+00	2.44E-02	0.00E+00	9.90E-04	0.00E+00	6.03E-02	2.00E-01	3.01E-01	6.00E-01	1.00E-01	0.43%	0.34%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	6.15E-04	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	6.16E-08	0.00E+00	0.00E+00	1.02E-05	0.00E+00	2.11E-07	0.00E+00	2.53E-07	0.00E+00	1.08E-05	8.00E-01	1.35E-05	4.00E+00	2.69E-06	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	2.06E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	2.06E-07	0.00E+00	0.00E+00	3.44E-05	0.00E+00	5.47E-06	0.00E+00	7.31E-07	0.00E+00	4.09E-05	8.00E-01	5.11E-05	4.00E+00	1.02E-05	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.85E-04	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	0.00E+00	2.86E-08	0.00E+00	0.00E+00	4.92E-06	0.00E+00	9.79E-08	0.00E+00	1.70E-07	0.00E+00	5.22E-06	8.00E-01	6.52E-06	4.00E+00	1.30E-06	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.90E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.90E-08	0.00E+00	0.00E+00	4.90E-06	0.00E+00	5.01E-08	0.00E+00	1.19E-07	0.00E+00	5.10E-06	4.58E+00	1.11E-06	9.16E+00	5.57E-07	0.00%	0.00%
Aluminum	6.11E+00	mg/L	9.69E+03	mg/kg	9.02E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	1.22E-01	9.70E-01	9.03E-01	9.39E-03	4.68E+01	1.14E+00	0.00E+00	8.90E-02	0.00E+00	2.79E-02	0.00E+00	5.00E+01	1.93E+00	2.59E+01	1.93E+01	2.59E+00	36.57%	8.66%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.57E+00	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	2.57E-04	0.00E+00	0.00E+00	3.14E-03	0.00E+00	7.71E-04	0.00E+00	1.52E-04	0.00E+00	4.32E-03	1.25E-01	3.45E-02	1.25E+00	3.45E-03	0.05%	0.01%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.34E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.35E-07	0.00E+00	0.00E+00	5.67E-05	0.00E+00	2.34E-06	0.00E+00	1.38E-06	0.00E+00	6.07E-05	6.85E-02	8.87E-04	6.85E-01	8.87E-05	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.90E-01	0.00E+00	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	5.97E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	0.00E+00	5.98E-07	0.00E+00	0.00E+00	1.04E-04	0.00E+00	2.27E-07	0.00E+00	2.27E-06	0.00E+00	1.07E-04	6.80E-02	1.57E-03	6.90E-01	1.55E-04	0.00%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	2.66E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	2.66E-07	0.00E+00	0.00E+00	4.86E-05	0.00E+00	5.18E-08	0.00E+00	1.82E-06	0.00E+00	5.07E-05	6.80E-02	7.46E-04	6.90E-01	7.35E-05	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.90E-01	0.00E+00	0.00%	0.00%
Barium	0.00E+00	mg/L	1.32E+02	mg/kg	1.01E+03	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	1.32E-02	1.01E-01	0.00E+00	6.39E-01	1.73E-01	0.00E+00	3.99E+00	0.00E+00	1.20E-02	0.00E+00	4.93E+00	5.10E+00	9.66E-01	1.98E+01	2.49E-01	1.36%	0.83%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	2.49E-03	mg/L	5.48E-01	mg/kg	5.20E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.25E+01	8.11E-01	8.31E-01	8.31E-01	9.22E-01	9.22E-01	4.95E-05	5.48E-05	5.20E-05	1.45E-03	4.69E-03	1.26E-02	0.00E+00	1.85E-03	0.00E+00	1.71E-04	0.00E+00	2.09E-02	1.00E+00	2.09E-02	1.00E+01	2.09E-03	0.03%	0.01%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.61E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	0.00E+00	0.00E+00	1.61E-03	0.00E+00	0.00E+00	5.45E-02	0.00E+00	3.31E-02	0.00E+00	1.91E-03	0.00E+00	9.10E-02	3.28E+00	2.78E-02	1.31E+01	6.93E-03	0.04%	0.02%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Copper	1.18E-02	mg/L	7.20E+00	mg/kg	1.37E+01	mg/kg	1.00E+00	5.92E+03	5.25E+00	8.28E-01	5.86E-01	3.96E-01	3.96E-01	1.49E-01	1.49E-01	2.35E-04	7.21E-04	1.37E-03	2.50E-02	4.05E-02	1.22E-02	0.00E+00	2.33E-02	0.00E+00	7.31E-04	0.00E+00	1.04E-01	1.17E+01	8.89E-03	1.51E+01	6.87E-03	0.01%	0.02%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-02	0.00E+00	2.00E-01	0.00E+00	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	4.39E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	4.39E-08	0.00E+00	0.00E+00	7.18E-06	0.00E+00	7.19E-08	0.00E+00	1.91E-07	0.00E+00	7.49E-06	9.20E-02	8.14E-05	9.20E-01	8.14E-06	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.10E-01	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.10E-05	0.00E+00	0.00E+00	3.49E-03	0.00E+00	1.70E-05	0.00E+00	8.63E-05	0.00E+00	3.61E-03	8.00E-02	4.51E-02	2.90E-01	1.25E-02	0.06%	0.04%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.43E-04	0.00E+00	0.00E+00	1.95E-02	0.00E+00	5.13E-02	0.00E+00	5.87E-04	0.00E+00	7.15E-02	1.00E+00	7.15E-02	5.00E+00	1.43E-02	0.10%	0.05%
Iron	5.98E+00	mg/L	0.00E+00	mg/kg	1.28E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	1.19E-01	0.00E+00	1.28E+00	2.14E+00	0.00E+00	1.07E+00	0.00E+00	2.20E-01	0.00E+00	9.46E-03	0.00E+00	4.84E+00	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	6.11E-06	0.00E+00	0.00E+00	1.43E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.44E-03	NA	NA	NA	NA	NA	NA
Lead	5.18E-03	mg/L	0.00E+00	mg/kg	7.44E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	3.57E-01	NA	3.97E-02	3.97E-02	1.33E-02	1.33E-02	1.03E-04	0.00E+00	7.45E-03	2.78E-03	0.00E+00	2.85E-02	NA	1.27E-02	0.00E+00	3.54E-04	0.00E+00	5.19E-02	8.00E+00	6.48E-03	8.00E+01	6.48E-04	0.01%	0.00%
Manganese	4.54E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+03	2.10E+00	NA	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	9.04E-03	0.00E+00	0.00E+00	3.25E-01	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.34E-01	8.80E+01	3.79E-03	2.84E+02	1.18E-03	0.01%	0.00%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E-01	mg/kg	1.00E+00		2.87E+00	4.75E+00	NA	1.02E+00	1.02E+00	1.03E-01	1.03E-01	0.00E+00	0.00E+00	1.10E-05	0.00E+00	0.00E+00	5.59E-04	NA	4.79E-04	0.00E+00	4.04E-06	0.00E+00	1.05E-03	1.00E+00	1.05E-03	3.00E+00	3.51E-04	0.00%	0.00%
Mercury (methyl)	0.00E+00	mg/L	9.58E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.08E+00	NA	NA			0.00E+00	9.59E-06	0.00E+00	0.00E+00	2.95E-04	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	3.04E-04	1.50E-02	2.03E-02	2.50E-02	1.22E-02	0.03%	0.04%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.52E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.52E-08	0.00E+00	0.00E+00	6.13E-06	0.00E+00	5.19E-08	0.00E+00	1.45E-07	0.00E+00	6.36E-06	7.00E-02	9.08E-05	7.00E-01	9.08E-06	0.00%	0.00%
Nickel	0.00E+00	mg/L	9.33E+00	mg/kg	7.49E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	6.21E-02	6.57E-02	6.57E-02	1.01E-01	1.01E-01	0.00E+00	9.34E-04	7.49E-04	0.00E+00	2.32E-02	3.80E-02	0.00E+00	2.11E-03	0.00E+00	2.70E-04	0.00E+00	6.52E-02	4.00E+01	1.63E-03	8.00E+01	8.16E-04	0.00%	0.00%
Nitrate	8.67E-01	mg/L	1.30E-01	mg/kg	1.08E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	1.73E-02	1.30E-05	1.08E-04	3.31E-01	2.92E-04	1.31E-03	0.00E+00	1.61E-03	0.00E+00	6.39E-05	0.00E+00	3.52E-01	5.07E+02	6.94E-04	1.13E+03	3.11E-04	0.00%	0.00%
Nitrate/Nitrite	7.06E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03								1.41E-03	0.00E+00	0.00E+00	2.70E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.84E-02	5.07E+02	5.59E-05	1.13E+03	2.51E-05	0.00%	0.00%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	3.51E-03	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.51E-07	0.00E+00	0.00E+00	5.43E-05	0.00E+00	2.84E-06	0.00E+00	1.45E-06	0.00E+00	5.89E-05	2.10E+00	2.81E-05	6.30E+00	9.36E-06	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	2.98E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.98E-08	0.00E+00	0.00E+00	4.85E-06	0.00E+00	4.28E-08	0.00E+00	1.23E-07	0.00E+00	5.04E-06	2.40E-01	2.10E-05	2.40E+00	2.10E-06	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	1.32E-01	mg/kg	1.00E+00			1.14E+00	NA	2.56E+01	2.56E+01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	1.32E-05	0.00E+00	0.00E+00	1.61E-04	NA	1.45E-02	0.00E+00	7.85E-06	0.00E+00	1.47E-02	8.50E+00	1.73E-03	2.55E+01	5.76E-04	0.00%	0.00%
Selenium	0.00E+00	mg/L	8.67E-01	mg/kg	6.76E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.03E+00	4.99E-01	4.87E-01	4.87E-01	1.95E-01	1.95E-01	0.00E+00	8.67E-05	6.76E-05	0.00E+00	4.18E-03	7.47E-04	0.00E+00	1.41E-03	0.00E+00	4.71E-05	0.00E+00	6.54E-03	2.00E-01	3.27E-02	3.30E-01	1.98E-02	0.05%	0.07%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	3.28E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	3.28E-03	0.00E+00	0.00E+00	9.77E-03	0.00E+00	4.92E-02	0.00E+00	1.95E-03	0.00E+00	6.42E-02	2.63E+02	2.44E-04	7.89E+02	8.14E-05	0.00%	0.00%
Sulfate	6.09E+00	mg/L	2.00E+01	mg/kg	1.04E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	1.21E-01	2.00E-03	1.04E-02	2.33E+00	4.49E-02	1.27E-01	0.00E+00	1.56E-01	0.00E+00	6.18E-03	0.00E+00	2.79E+00	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	7.12E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00							0.00E+00	7.12E-05	0.00E+00	0.00E+00	3.43E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.51E-03	7.40E-03	4.74E-01	7.40E-02	4.74E-02	0.67%	0.16%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Vanadium	3.33E-02	mg/L	0.00E+00	mg/kg	2.15E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	6.63E-04	0.00E+00	2.15E-03	1.27E-02	0.00E+00	2.02E-03	0.00E+00	3.68E-04	0.00E+00	4.54E-05	0.00E+00	1.80E-02	2.10E-01	8.55E-02	2.10E+00	8.55E-03	0.12%	0.03%
Zinc	0.00E+00	mg/L	3.82E+01	mg/kg	6.24E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.31E+00	9.78E-01	7.87E-01	7.87E-01	4.51E-01	4.51E-01	0.00E+00	3.82E-03	6.25E-03	0.00E+00	3.08E-01	3.56E-01	0.00E+00	2.11E-01	0.00E+00	1.01E-02	0.00E+00	8.95E-01	1.60E+02	5.59E-03	3.20E+02	2.80E-03	0.01%	0.01%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	4.0E+01	2.7E+01	56.70%	88.91%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.1E-06	5.6E-07	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	7.1E-05	1.4E-05	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	3.2E-03	3.2E-04	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	8.1E-05	8.1E-06	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0.6	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.05	unitless
Aq. Invert diet fraction =	0.15	unitless
Terr. Invert diet fraction =	0.15	unitless
Mammal diet fraction =	0.05	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.002394	kg/d
Sediment ingestion rate =	0.002394	kg/d
Food ingestion rate =	0.171	kg/d
Body weight =	5.78	kg
Home range =	2011	acres
Water intake rate =	0.476	L/d
Site Area =	486	acres
Area Use Factor (AUF) =	0.241671	unitless
Exposure Duration (ED) =	1	unitless

Table E-162
Tier 2 COPCs
EEQs and Hazard Indices for the Raccoon-Louisiana Black Bear at LHAAP
Waste Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							--------Unitless								--------	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	5.16E+00	mg/kg	#######			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	5.16E-04	0.00E+00	0.00E+00	4.16E-02	0.00E+00	1.24E-01	0.00E+00	1.62E-03	0.00E+00	1.68E-01	2.68E+00	6.27E-02	1.33E+01	1.26E-02	0.18%	0.13%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.49E-01	mg/kg	#######			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.49E-05	0.00E+00	0.00E+00	1.21E-03	0.00E+00	2.83E-03	0.00E+00	4.68E-05	0.00E+00	4.11E-03	1.13E-01	3.64E-02	2.64E-01	1.56E-02	0.11%	0.15%
2,3,7,8-TCDD TEQ	1.07E-08	mg/L	5.59E-06	mg/kg	3.16E-05	mg/kg	#######	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	2.12E-10	5.60E-10	3.17E-09	8.81E-08	2.80E-08	3.74E-07	0.00E+00	5.26E-10	0.00E+00	5.35E-10	0.00E+00	4.95E-07	1.00E-06	4.95E-01	1.00E-05	4.95E-02	1.44%	0.49%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	2.47E+02	mg/kg	#######			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.47E-02	0.00E+00	0.00E+00	2.04E+00	0.00E+00	1.69E-01	0.00E+00	7.75E-02	0.00E+00	2.31E+00	2.00E-01	1.16E+01	3.00E-01	7.70E+00	33.63%	76.32%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	5.56E-01	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	5.57E-05	0.00E+00	0.00E+00	4.62E-03	0.00E+00	5.08E-03	0.00E+00	1.74E-04	0.00E+00	9.93E-03	2.00E-01	4.96E-02	1.50E+00	6.62E-03	0.14%	0.07%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	1.24E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.25E-04	0.00E+00	0.00E+00	1.03E-02	0.00E+00	1.14E-02	0.00E+00	3.90E-04	0.00E+00	2.22E-02	2.00E-01	1.11E-01	6.00E-01	3.70E-02	0.32%	0.37%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	4.55E-04	mg/kg	#######		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.56E-08	0.00E+00	0.00E+00	4.37E-06	0.00E+00	5.47E-08	0.00E+00	1.43E-07	0.00E+00	4.61E-06	8.00E-01	5.77E-06	4.00E+00	1.15E-06	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.48E-03	mg/kg	#######		4.75E+00	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	1.48E-07	0.00E+00	0.00E+00	1.42E-05	0.00E+00	8.61E-07	0.00E+00	4.97E-07	0.00E+00	1.57E-05	8.00E-01	1.97E-05	4.00E+00	3.94E-06	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.98E-04	mg/kg	#######		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	1.99E-08	0.00E+00	0.00E+00	1.97E-06	0.00E+00	2.38E-08	0.00E+00	6.29E-08	0.00E+00	2.08E-06	8.00E-01	2.60E-06	4.00E+00	5.20E-07	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.37E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.37E-08	0.00E+00	0.00E+00	2.31E-06	0.00E+00	9.47E-09	0.00E+00	7.42E-08	0.00E+00	2.42E-06	4.58E+00	5.27E-07	9.16E+00	2.64E-07	0.00%	0.00%
Aluminum	4.16E+00	mg/L	8.09E+03	mg/kg	6.95E+03	mg/kg	#######	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	8.27E-02	8.10E-01	6.96E-01	6.39E-03	3.90E+01	3.21E-01	0.00E+00	4.47E-02	0.00E+00	1.65E-02	0.00E+00	4.10E+01	1.93E+00	2.13E+01	1.93E+01	2.13E+00	61.88%	21.06%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.06E+00	mg/kg	#######			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	2.06E-04	0.00E+00	0.00E+00	6.63E-04	0.00E+00	3.27E-04	0.00E+00	8.16E-05	0.00E+00	1.28E-03	1.25E-01	1.02E-02	1.25E+00	1.02E-03	0.03%	0.01%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.22E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.22E-07	0.00E+00	0.00E+00	2.17E-05	0.00E+00	7.99E-08	0.00E+00	6.96E-07	0.00E+00	2.27E-05	6.85E-02	3.32E-04	6.85E-01	3.32E-05	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.90E-01	0.00E+00	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.21E-03	mg/kg	#######		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	4.22E-07	0.00E+00	0.00E+00	4.22E-05	0.00E+00	6.46E-08	0.00E+00	7.49E-07	0.00E+00	4.35E-05	6.80E-02	6.39E-04	6.90E-01	6.30E-05	0.00%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.94E-03	mg/kg	#######			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	1.94E-07	0.00E+00	0.00E+00	2.04E-05	0.00E+00	5.34E-09	0.00E+00	1.16E-06	0.00E+00	2.18E-05	6.80E-02	3.21E-04	6.90E-01	3.16E-05	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.90E-01	0.00E+00	0.00%	0.00%
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	5.33E+02	mg/kg	#######	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	1.18E-02	5.34E-02	0.00E+00	5.70E-01	5.20E-02	0.00E+00	3.57E-01	0.00E+00	3.81E-03	0.00E+00	1.05E+00	5.10E+00	2.05E-01	1.98E+01	5.29E-02	0.60%	0.52%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	2.09E-03	mg/L	4.57E-01	mg/kg	4.73E-01	mg/kg	#######	1.15E+03	6.00E-01	2.35E+01	8.80E-01	8.67E-01	8.67E-01	6.72E-01	6.72E-01	4.15E-05	4.58E-05	4.73E-05	8.56E-04	2.94E-04	1.19E-02	0.00E+00	1.76E-03	0.00E+00	1.14E-04	0.00E+00	1.51E-02	1.00E+00	1.51E-02	1.00E+01	1.51E-03	0.04%	0.01%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.46E+01	mg/kg	#######	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	0.00E+00	0.00E+00	1.46E-03	0.00E+00	0.00E+00	4.80E-03	0.00E+00	2.57E-03	0.00E+00	4.42E-04	0.00E+00	9.28E-03	3.28E+00	2.83E-03	1.31E+01	7.06E-04	0.01%	0.01%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Copper	9.31E-03	mg/L	6.17E+00	mg/kg	1.09E+01	mg/kg	#######	1.11E+03	1.56E+00	9.82E-01	6.44E-01	4.54E-01	4.54E-01	8.97E-02	8.97E-02	1.85E-04	6.17E-04	1.09E-03	3.70E-03	1.03E-02	1.15E-02	0.00E+00	2.13E-02	0.00E+00	3.51E-04	0.00E+00	4.91E-02	1.17E+01	4.20E-03	1.51E+01	3.24E-03	0.01%	0.03%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-02	0.00E+00	2.00E-01	0.00E+00	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.17E-04	mg/kg	#######			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	3.17E-08	0.00E+00	0.00E+00	2.99E-06	0.00E+00	3.73E-08	0.00E+00	1.38E-07	0.00E+00	3.20E-06	9.20E-02	3.48E-05	9.20E-01	3.48E-06	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.52E-01	mg/kg	#######			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.52E-05	0.00E+00	0.00E+00	1.46E-03	0.00E+00	1.04E-05	0.00E+00	4.77E-05	0.00E+00	1.53E-03	8.00E-02	1.92E-02	2.90E-01	5.29E-03	0.06%	0.05%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	1.03E+00	mg/kg	#######			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.03E-04	0.00E+00	0.00E+00	8.13E-03	0.00E+00	3.71E-02	0.00E+00	3.23E-04	0.00E+00	4.57E-02	1.00E+00	4.57E-02	5.00E+00	9.13E-03	0.13%	0.09%
Iron	4.18E+00	mg/L	0.00E+00	mg/kg	1.12E+04	mg/kg	#######	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	8.31E-02	0.00E+00	1.12E+00	3.73E-01	0.00E+00	4.32E-01	0.00E+00	1.92E-01	0.00E+00	7.03E-03	0.00E+00	2.21E+00	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	#######		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	6.11E-06	0.00E+00	0.00E+00	3.06E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.12E-04	NA	NA	NA	NA	NA	NA
Lead	4.09E-03	mg/L	0.00E+00	mg/kg	4.77E+01	mg/kg	#######	4.48E+02	7.10E-02	3.89E-01	NA	4.83E-02	4.83E-02	1.16E-02	1.16E-02	8.14E-05	0.00E+00	4.77E-03	6.55E-04	0.00E+00	1.99E-02	NA	9.88E-03	0.00E+00	1.98E-04	0.00E+00	3.55E-02	8.00E+00	4.43E-03	8.00E+01	4.43E-04	0.01%	0.00%
Manganese	3.17E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	2.50E+02	4.20E-01	NA	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	6.30E-03	0.00E+00	0.00E+00	2.83E-02	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.46E-02	8.80E+01	3.93E-04	2.84E+02	1.22E-04	0.00%	0.00%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	9.02E-02	mg/kg	#######		1.14E+00	5.42E+00	NA	1.11E+00	1.11E+00	9.15E-02	9.15E-02	0.00E+00	0.00E+00	9.02E-06	0.00E+00	0.00E+00	5.24E-04	NA	4.30E-04	0.00E+00	2.95E-06	0.00E+00	9.66E-04	1.00E+00	9.66E-04	3.00E+00	3.22E-04	0.00%	0.00%
Mercury (methyl)	0.00E+00	mg/L	8.35E-02	mg/kg	0.00E+00	mg/kg	#######		1.14E+00	NA	1.15E+00	NA	NA			0.00E+00	8.35E-06	0.00E+00	0.00E+00	1.02E-04	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	1.10E-04	1.50E-02	7.34E-03	2.50E-02	4.40E-03	0.02%	0.04%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.47E-04	mg/kg	#######			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.47E-08	0.00E+00	0.00E+00	2.48E-06	0.00E+00	3.65E-09	0.00E+00	7.74E-08	0.00E+00	2.59E-06	7.00E-02	3.70E-05	7.00E-01	3.70E-06	0.00%	0.00%
Nickel	0.00E+00	mg/L	8.12E+00	mg/kg	7.04E+00	mg/kg	#######		4.86E-01	1.06E+00	6.43E-02	6.67E-02	6.67E-02	8.71E-02	8.71E-02	0.00E+00	8.13E-04	7.05E-04	0.00E+00	4.23E-03	8.00E-03	0.00E+00	2.01E-03	0.00E+00	2.19E-04	0.00E+00	1.60E-02	4.00E+01	4.00E-04	8.00E+01	2.00E-04	0.00%	0.00%
Nitrate	4.79E-01	mg/L	9.50E-02	mg/kg	6.12E-01	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	9.53E-03	9.51E-06	6.13E-05	5.15E-02	4.28E-05	1.97E-04	0.00E+00	5.52E-04	0.00E+00	2.42E-05	0.00E+00	6.19E-02	5.07E+02	1.22E-04	1.13E+03	5.48E-05	0.00%	0.00%
Nitrate/Nitrite	5.55E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	3.01E+02								1.10E-03	0.00E+00	0.00E+00	5.97E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.07E-03	5.07E+02	1.40E-05	1.13E+03	6.26E-06	0.00%	0.00%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	3.21E-03	mg/kg	#######			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.21E-07	0.00E+00	0.00E+00	2.86E-05	0.00E+00	2.27E-06	0.00E+00	1.00E-06	0.00E+00	3.22E-05	2.10E+00	1.53E-05	6.30E+00	5.11E-06	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	2.24E-04	mg/kg	#######			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.25E-08	0.00E+00	0.00E+00	2.11E-06	0.00E+00	2.64E-08	0.00E+00	7.03E-08	0.00E+00	2.23E-06	2.40E-01	9.27E-06	2.40E+00	9.27E-07	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	9.65E-02	mg/kg	#######			3.00E-01	NA	2.91E+01	2.91E+01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	9.66E-06	0.00E+00	0.00E+00	3.11E-05	NA	1.20E-02	0.00E+00	3.82E-06	0.00E+00	1.21E-02	8.50E+00	1.42E-03	2.55E+01	4.74E-04	0.00%	0.00%
Selenium	0.00E+00	mg/L	7.51E-01	mg/kg	5.98E-01	mg/kg	#######	2.05E+02	4.50E+00	1.07E+00	4.92E-01	4.81E-01	4.81E-01	1.51E-01	1.51E-01	0.00E+00	7.51E-05	5.99E-05	0.00E+00	3.62E-03	6.84E-04	0.00E+00	1.24E-03	0.00E+00	3.23E-05	0.00E+00	5.71E-03	2.00E-01	2.85E-02	3.30E-01	1.73E-02	0.08%	0.17%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.45E+01	mg/kg	#######		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	2.45E-03	0.00E+00	0.00E+00	2.29E-03	0.00E+00	2.21E-02	0.00E+00	9.70E-04	0.00E+00	2.78E-02	2.63E+02	1.06E-04	7.89E+02	3.52E-05	0.00%	0.00%
Sulfate	5.14E+00	mg/L	1.39E+01	mg/kg	4.14E+01	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	1.02E-01	1.39E-03	4.15E-03	5.52E-01	6.25E-03	1.33E-02	0.00E+00	3.73E-02	0.00E+00	1.64E-03	0.00E+00	7.19E-01	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	6.14E-01	mg/kg	0.00E+00	mg/kg	#######	7.50E+01	4.50E+00							0.00E+00	6.14E-05	0.00E+00	0.00E+00	2.96E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.02E-03	7.40E-03	4.09E-01	7.40E-02	4.09E-02	1.19%	0.40%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Vanadium	2.64E-02	mg/L	0.00E+00	mg/kg	1.89E+01	mg/kg	#######	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	5.25E-04	0.00E+00	1.89E-03	2.84E-03	0.00E+00	8.52E-04	0.00E+00	2.92E-04	0.00E+00	3.71E-05	0.00E+00	6.44E-03	2.10E-01	3.07E-02	2.10E+00	3.07E-03	0.09%	0.03%
Zinc	0.00E+00	mg/L	3.22E+01	mg/kg	4.92E+01	mg/kg	#######	2.91E+03	1.94E+00	6.23E+00	1.05E+00	8.74E-01	8.74E-01	1.84E-01	1.84E-01	0.00E+00	3.22E-03	4.93E-03	0.00E+00	6.69E-02	3.29E-01	0.00E+00	1.85E-01	0.00E+00	3.24E-03	0.00E+00	5.92E-01	1.60E+02	3.70E-03	3.20E+02	1.85E-03	0.01%	0.02%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	1.2E+01	7.7E+00	34.09%	76.75%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	5.3E-07	2.6E-07	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	2.8E-05	5.6E-06	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.3E-03	1.3E-04	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	3.5E-05	3.5E-06	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rate, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0.6	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.05	unitless
Aq. Invert diet fraction =	0.15	unitless
Terr. Invert diet fraction =	0.15	unitless
Mammal diet fraction =	0.05	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.002394	kg/d
Sediment ingestion rate =	0.002394	kg/d
Food ingestion rate =	0.171	kg/d
Body weight =	5.78	kg
Home range =	2011	acres
Water intake rate =	0.476	L/d
Site Area =	486	acres
Area Use Factor (AUF) =	0.241671	unitless
Exposure Duration (ED) =	1	unitless

Table E-163
Tier 1 COPCs
EEQs and Hazard Indices for the Short-tailed Shrew at LHAAP
Waste Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Total Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
							---Unitless---								
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E+01	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.24E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00
2,3,7,8-TCDD TEQ	1.22E-08	mg/L	8.87E-06	mg/kg	3.40E-05	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	2.87E+02	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	1.01E+02	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	1.36E+01	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	5.15E-04	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	2.45E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.93E-04	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.13E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Aluminum	6.11E+00	mg/L	9.69E+03	mg/kg	9.30E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	8.22E-01	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.08E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	6.24E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	2.60E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00
Barium	0.00E+00	mg/L	1.32E+02	mg/kg	5.53E+02	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	5.43E-01	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00
Cadmium	2.49E-03	mg/L	5.48E-01	mg/kg	6.67E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.01E+01	8.11E-01	7.42E-01	7.42E-01	9.22E-01	9.22E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.72E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Copper	1.18E-02	mg/L	7.20E+00	mg/kg	1.15E+01	mg/kg	1.00E+00	5.92E+03	5.25E+00	9.45E-01	5.86E-01	4.40E-01	4.40E-01	1.49E-01	1.49E-01
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	4.91E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E-01	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	1.36E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00
Iron	5.98E+00	mg/L	0.00E+00	mg/kg	1.42E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01		
Lead	5.18E-03	mg/L	0.00E+00	mg/kg	5.58E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	3.78E-01	NA	4.51E-02	4.51E-02	1.33E-02	1.33E-02
Manganese	4.54E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+03	2.10E+00	NA	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	9.67E-02	mg/kg	1.00E+00		2.87E+00	5.17E+00	NA	1.08E+00	1.08E+00	1.03E-01	1.03E-01
Mercury (methyl)	0.00E+00	mg/L	9.58E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.08E+00	NA	NA		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.89E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00
Nickel	0.00E+00	mg/L	9.33E+00	mg/kg	8.42E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	6.21E-02	6.38E-02	6.38E-02	1.01E-01	1.01E-01
Nitrate	8.67E-01	mg/L	1.30E-01	mg/kg	1.34E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Nitrate/Nitrite	7.06E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	4.40E-03	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	2.58E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.61E-01	mg/kg	1.00E+00			1.14E+00	NA	1.93E+01	1.93E+01	1.66E-01	1.66E-01
Selenium	0.00E+00	mg/L	8.67E-01	mg/kg	6.71E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.03E+00	4.99E-01	4.87E-01	4.87E-01	1.95E-01	1.95E-01
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.71E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Sulfate	6.09E+00	mg/L	2.00E+01	mg/kg	4.00E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Thallium	0.00E+00	mg/L	7.12E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Vanadium	3.33E-02	mg/L	0.00E+00	mg/kg	2.36E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03
Zinc	0.00E+00	mg/L	3.82E+01	mg/kg	5.17E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	6.03E+00	9.78E-01	8.56E-01	8.56E-01	4.51E-01	4.51E-01

Chemical	EED Surface Water (mg/kg-d)	EED Sediment (mg/kg-d)	EED Soil (mg/kg-d)	EED Fish (mg/kg-d)	EED Aq. Invert. (mg/kg-d)	EED Terr. Invert. (mg/kg-d)	EED Aq. Plants (mg/kg-d)	EED Terr. Plants (mg/kg-d)	EED Plant Roots (mg/kg-d)	EED Mammals (mg/kg-d)	EED Birds (mg/kg-d)	Total EED (mg/kg-d)	NOAEL (mg/kg-d)	EEQ N	LOAEL (mg/kg-d)	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	2.38E-01	0.00E+00	0.00E+00	2.39E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.42E+01	2.68E+00	9.01E+00	1.33E+01	1.81E+00	0.29%	0.12%
1,3-Dinitrobenzene	0.00E+00	0.00E+00	1.73E-02	0.00E+00	0.00E+00	1.75E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.77E+00	1.13E-01	1.56E+01	2.64E-01	6.69E+00	0.49%	0.43%
2,3,7,8-TCDD TEQ	2.68E-09	0.00E+00	4.75E-07	0.00E+00	0.00E+00	8.13E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.18E-05	1.00E-06	8.18E+01	1.00E-05	8.18E+00	2.59%	0.53%
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	4.01E+00	0.00E+00	0.00E+00	4.11E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.15E+02	2.00E-01	2.07E+03	3.00E-01	1.38E+03	65.65%	89.40%
2,4-Dinitrotoluene	0.00E+00	0.00E+00	1.41E+00	0.00E+00	0.00E+00	1.46E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.47E+02	2.00E-01	7.35E+02	1.50E+00	9.80E+01	23.25%	6.33%
2,6-Dinitrotoluene	0.00E+00	0.00E+00	1.90E-01	0.00E+00	0.00E+00	1.96E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.98E+01	2.00E-01	9.92E+01	6.00E-01	3.31E+01	3.14%	2.14%
4,4'-DDD	0.00E+00	0.00E+00	7.20E-06	0.00E+00	0.00E+00	8.59E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.66E-04	8.00E-01	1.08E-03	4.00E+00	2.17E-04	0.00%	0.00%
4,4'-DDE	0.00E+00	0.00E+00	3.43E-05	0.00E+00	0.00E+00	4.11E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.15E-03	8.00E-01	5.18E-03	4.00E+00	1.04E-03	0.00%	0.00%
4,4'-DDT	0.00E+00	0.00E+00	4.09E-06	0.00E+00	0.00E+00	5.06E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E-04	8.00E-01	6.38E-04	4.00E+00	1.28E-04	0.00%	0.00%
Aldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
alpha-Chlordane	0.00E+00	0.00E+00	2.98E-06	0.00E+00	0.00E+00	3.61E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.64E-04	4.58E+00	7.94E-05	9.16E+00	3.97E-05	0.00%	0.00%
Aluminum	1.34E+00	0.00E+00	1.30E+02	0.00E+00	0.00E+00	1.18E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.49E+02	1.93E+00	1.29E+02	1.93E+01	1.29E+01	4.08%	0.83%
Antimony	0.00E+00	0.00E+00	1.15E-02	0.00E+00	0.00E+00	1.01E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.12E-01	1.25E-01	8.97E-01	1.25E+00	8.97E-02	0.03%	0.01%
Aroclor 1242	0.00E+00	0.00E+00	4.30E-05	0.00E+00	0.00E+00	5.23E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.27E-03	6.85E-02	7.70E-02	6.85E-01	7.70E-03	0.00%	0.00%
Aroclor 1248	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.80E-01	0.00E+00	0.00%	0.00%
Aroclor 1254	0.00E+00	0.00E+00	8.72E-05	0.00E+00	0.00E+00	1.09E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E-02	6.80E-02	1.61E-01	6.80E-01	1.61E-02	0.01%	0.00%
Aroclor 1260	0.00E+00	0.00E+00	3.63E-05	0.00E+00	0.00E+00	4.77E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.80E-03	6.80E-02	7.06E-02	6.80E-01	7.06E-03	0.00%	0.00%
Aroclor 1268	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.80E-01	0.00E+00	0.00%	0.00%
Barium	0.00E+00	0.00E+00	7.72E+00	0.00E+00	0.00E+00	9.50E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.72E+01	5.10E+00	3.38E+00	1.98E+01	8.70E-01	0.11%	0.06%
Benzoic Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	0.00E+00	7.58E-03	0.00E+00	0.00E+00	8.70E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.77E-01	1.59E+01	5.52E-02	4.70E+01	1.87E-02	0.00%	0.00%
Cadmium	5.47E-04	0.00E+00	9.32E-03	0.00E+00	0.00E+00	1.44E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.45E+00	1.00E+00	1.45E+00	1.00E+01	1.45E-01	0.05%	0.01%
Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Chromium	0.00E+00	0.00E+00	2.39E-01	0.00E+00	0.00E+00	5.82E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.06E+00	3.28E+00	1.85E+00	1.31E+01	4.61E-01	0.06%	0.03%
cis-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Copper	2.60E-03	0.00E+00	1.61E-01	0.00E+00	0.00E+00	1.17E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E+00	1.17E+01	1.14E-01	1.51E+01	8.79E-02	0.00%	0.01%
Dieldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-02	0.00E+00	2.00E-01	0.00E+00	0.00%	0.00%
Endrin	0.00E+00	0.00E+00	6.85E-06	0.00E+00	0.00E+00	8.05E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.11E-04	9.20E-02	8.82E-03	9.20E-01	8.82E-04	0.00%	0.00%
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	0.00E+00	1.53E-03	0.00E+00	0.00E+00	1.83E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.85E-01	8.00E-02	2.31E+00	2.90E-01	6.37E-01	0.07%	0.04%
HMX	0.00E+00	0.00E+00	1.89E-02	0.00E+00	0.00E+00	1.86E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.88E+00	1.00E+00	1.88E+00	5.00E+00	3.75E-01	0.06%	0.02%
Iron	1.31E+00	0.00E+00	1.98E+02	0.00E+00	0.00E+00	1.19E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.19E+02	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	1.14E-03	0.00E+00	7.79E-01	0.00E+00	0.00E+00	2.26E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.04E+00	8.00E+00	3.80E-01	8.00E+01	3.80E-02	0.01%	0.00%
Manganese	1.00E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	8.80E+01	1.14E-03	2.84E+02	3.52E-04	0.00%	0.00%
Mercury (inorganic)	0.00E+00	0.00E+00	1.35E-03	0.00E+00	0.00E+00	5.37E-02	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.51E-02	1.32E+01	4.17E-03	3.96E+01	1.39E-03	0.00%	0.00%
Mercury (methyl)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	3.20E-02	0.00E+00	1.60E-01	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	0.00E+00	4.04E-06	0.00E+00	0.00E+00	5.04E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.08E-04	7.00E-02	7.26E-03	7.00E-01	7.26E-04	0.00%	0.00%
Nickel	0.00E+00	0.00E+00	1.18E-01	0.00E+00	0.00E+00	4.28E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.39E+00	4.00E+01	1.10E-01	8.00E+01	5.49E-02	0.00%	0.00%
Nitrate	1.91E-01	0.00E+00	1.87E-02	0.00E+00	0.00E+00	1.64E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.73E-01	5.07E+02	7.36E-04	1.13E+03	3.30E-04	0.00%	0.00%
Nitrate/Nitrite	1.55E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.55E-02	5.07E+02	3.06E-05	1.13E+03	1.37E-05	0.00%	0.00%
Oxychlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	0.00E+00	6.14E-05	0.00E+00	0.00E+00	6.82E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.88E-03	2.10E+00	3.28E-03	6.30E+00	1.09E-03	0.00%	0.00%
Pentachloroanisole	0.00E+00	0.00E+00	3.60E-06	0.00E+00	0.00E+00	4.20E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.24E-04	2.40E-01	1.77E-03	2.40E+00	1.77E-04	0.00%	0.00%
Pentachlorophenol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	0.00E+00	3.64E-03	0.00E+00	0.00E+00	3.19E-02	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.56E-02	8.50E+00	4.18E-03	2.55E+01	1.39E-03	0.00%	0.00%
Selenium	0.00E+00	0.00E+00	9.37E-03	0.00E+00	0.00E+00	7.45E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.39E-02	2.00E-01	4.19E-01	3.30E-01	2.54E-01	0.01%	0.02%
Silver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	0.00E+00	3.78E-01	0.00E+00	0.00E+00	8.09E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.19E+00	2.63E+02	4.52E-03	7.89E+02	1.51E-03	0.00%	0.00%
Sulfate	1.34E+00	0.00E+00	5.59E+00	0.00E+00	0.00E+00	4.90E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.59E+01	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.40E-03	0.00E+00	7.40E-02	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Vanadium	7.33E-03	0.00E+00	3.30E-01	0.00E+00	0.00E+00	2.23E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.60E-01	2.10E-01	2.67E+00	2.10E+00	2.67E-01	0.08%	0.02%
Zinc	0.00E+00	0.00E+00	7.22E-01	0.00E+00	0.00E+00	3.35E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.42E+01	1.60E+02	2.14E-01	3.20E+02	1.07E-01	0.01%	0.01%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	2.9E+03	1.5E+03	92.04%	97.87%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	7.9E-05	4.0E-05	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	6.9E-03	1.4E-03	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	3.1E-01	3.1E-02	0.01%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	5.5E-02	1.9E-02	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	8.8E-03	8.8E-04	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi \, x \, Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	1	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.000209	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.001611	kg/d
Body weight =	0.015	kg
Home range =	0.074131	acres
Water intake rate =	0.0033	L/d
Site Area =	486	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-164
Tier 2 COPCs
EEQs and Hazard Indices for the Short-tailed Shrew at LHAAP
Waste Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Total Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							----------Unitless----------									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.26E+01	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.76E-01	0.00E+00	0.00E+00	1.02E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.03E+01	2.68E+00	3.86E+00	1.33E+01	7.77E-01	0.39%	0.17%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.14E+00	mg/kg	1.00E+00			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.59E-02	0.00E+00	0.00E+00	9.26E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.42E-01	1.13E-01	8.33E+00	2.64E-01	3.57E+00	0.84%	0.76%
2,3,7,8-TCDD TEQ	1.07E-08	mg/L	5.59E-06	mg/kg	2.05E-05	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	2.35E-09	0.00E+00	2.87E-07	0.00E+00	0.00E+00	2.43E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.46E-05	1.00E-06	2.46E+01	1.00E-05	2.46E+00	2.48%	0.52%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	1.48E+02	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.07E+00	0.00E+00	0.00E+00	1.22E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E+02	2.00E-01	6.23E+02	3.00E-01	4.15E+02	62.94%	88.31%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	5.04E+01	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	7.04E-01	0.00E+00	0.00E+00	4.19E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.26E+01	2.00E-01	2.13E+02	1.50E+00	2.84E+01	21.54%	6.04%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	7.15E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	9.98E-02	0.00E+00	0.00E+00	5.95E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.05E+00	2.00E-01	3.02E+01	6.00E-01	1.01E+01	3.06%	2.14%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	3.62E-04	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	5.06E-06	0.00E+00	0.00E+00	3.48E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.53E-04	8.00E-01	4.41E-04	4.00E+00	8.83E-05	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.86E-03	mg/kg	1.00E+00		4.75E+00	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	2.59E-05	0.00E+00	0.00E+00	1.79E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.82E-03	8.00E-01	2.28E-03	4.00E+00	4.55E-04	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.21E-04	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	3.08E-06	0.00E+00	0.00E+00	2.20E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.23E-04	8.00E-01	2.79E-04	4.00E+00	5.58E-05	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	6.95E-01	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	9.70E-03	0.00E+00	0.00E+00	6.78E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.88E-01	4.58E+00	1.50E-01	9.16E+00	7.51E-02	0.02%	0.02%
Aluminum	4.16E+00	mg/L	8.09E+03	mg/kg	8.02E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	9.14E-01	0.00E+00	1.12E+02	0.00E+00	0.00E+00	3.71E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.50E+02	1.93E+00	7.77E+01	1.93E+01	7.77E+00	7.86%	1.65%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	6.95E-01	mg/kg	1.00E+00			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	9.70E-03	0.00E+00	0.00E+00	2.24E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.21E-02	1.25E-01	2.57E-01	1.25E+00	2.57E-02	0.03%	0.01%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.09E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.92E-05	0.00E+00	0.00E+00	2.05E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.08E-03	6.85E-02	3.03E-02	6.85E-01	3.03E-03	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.80E-01	0.00E+00	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.33E-03	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	6.05E-05	0.00E+00	0.00E+00	4.35E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.41E-03	6.80E-02	6.49E-02	6.80E-01	6.49E-03	0.01%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.97E-03	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	2.76E-05	0.00E+00	0.00E+00	2.09E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.11E-03	6.80E-02	3.11E-02	6.80E-01	3.11E-03	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.80E-01	0.00E+00	0.00%	0.00%
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	4.81E+02	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	0.00E+00	6.72E+00	0.00E+00	0.00E+00	4.71E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.14E+01	5.10E+00	2.24E+00	1.98E+01	5.77E-01	0.23%	0.12%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	4.45E-01	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	6.21E-03	0.00E+00	0.00E+00	4.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.17E-01	1.59E+01	2.62E-02	4.70E+01	8.87E-03	0.00%	0.00%
Cadmium	2.09E-03	mg/L	4.57E-01	mg/kg	5.66E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	2.17E+01	8.80E-01	7.99E-01	7.99E-01	6.72E-01	6.72E-01	4.59E-04	0.00E+00	7.90E-03	0.00E+00	0.00E+00	1.32E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E+00	1.00E+00	1.33E+00	1.00E+01	1.33E-01	0.13%	0.03%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.57E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	0.00E+00	0.00E+00	2.20E-01	0.00E+00	0.00E+00	5.17E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.37E-01	3.28E+00	2.25E-01	1.31E+01	5.61E-02	0.02%	0.01%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Copper	9.31E-03	mg/L	6.17E+00	mg/kg	9.30E+00	mg/kg	1.00E+00	1.11E+03	1.56E+00	1.11E+00	6.44E-01	5.01E-01	5.01E-01	8.97E-02	8.97E-02	2.05E-03	0.00E+00	1.30E-01	0.00E+00	0.00E+00	1.11E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.24E+00	1.17E+01	1.06E-01	1.51E+01	8.20E-02	0.01%	0.02%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-02	0.00E+00	2.00E-01	0.00E+00	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.35E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	4.67E-06	0.00E+00	0.00E+00	3.16E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.21E-04	9.20E-02	3.49E-03	9.20E-01	3.49E-04	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	6.30E-02	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	8.80E-04	0.00E+00	0.00E+00	6.05E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.14E-02	8.00E-02	7.68E-01	2.90E-01	2.12E-01	0.08%	0.05%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	1.00E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.40E-02	0.00E+00	0.00E+00	7.90E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.04E-01	1.00E+00	8.04E-01	5.00E+00	1.61E-01	0.08%	0.03%
Iron	4.18E+00	mg/L	0.00E+00	mg/kg	1.27E+04	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	9.19E-01	0.00E+00	1.78E+02	0.00E+00	0.00E+00	4.92E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.28E+02	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	4.09E-03	mg/L	0.00E+00	mg/kg	4.62E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	3.91E-01	NA	4.90E-02	4.90E-02	1.16E-02	1.16E-02	9.00E-04	0.00E+00	6.45E-01	0.00E+00	0.00E+00	1.94E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.59E+00	8.00E+00	3.23E-01	8.00E+01	3.23E-02	0.03%	0.01%
Manganese	3.17E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.50E+02	4.20E-01	NA	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	6.97E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.97E-02	8.80E+01	7.92E-04	2.84E+02	2.45E-04	0.00%	0.00%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	8.59E-02	mg/kg	1.00E+00		1.14E+00	5.60E+00	NA	1.14E+00	1.14E+00	9.15E-02	9.15E-02	0.00E+00	0.00E+00	1.20E-03	0.00E+00	0.00E+00	5.16E-02	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.28E-02	1.32E+01	4.00E-03	3.96E+01	1.33E-03	0.00%	0.00%
Mercury (methyl)	0.00E+00	mg/L	8.35E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	1.15E+00	NA	NA			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	3.20E-02	0.00E+00	1.60E-01	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-04	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.33E-06	0.00E+00	0.00E+00	2.40E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.43E-04	7.00E-02	3.47E-03	7.00E-01	3.47E-04	0.00%	0.00%
Nickel	0.00E+00	mg/L	8.12E+00	mg/kg	7.73E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	6.43E-02	6.51E-02	6.51E-02	8.71E-02	8.71E-02	0.00E+00	0.00E+00	1.08E-01	0.00E+00	0.00E+00	8.79E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.87E-01	4.00E+01	2.47E-02	8.00E+01	1.23E-02	0.00%	0.00%
Nitrate	4.79E-01	mg/L	9.50E-02	mg/kg	1.00E+00	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	1.05E-01	0.00E+00	1.40E-02	0.00E+00	0.00E+00	3.23E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E-01	5.07E+02	2.99E-04	1.13E+03	1.34E-04	0.00%	0.00%
Nitrate/Nitrite	5.55E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02								1.22E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.22E-02	5.07E+02	2.41E-05	1.13E+03	1.08E-05	0.00%	0.00%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	3.13E-03	mg/kg	1.00E+00			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.37E-05	0.00E+00	0.00E+00	2.79E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.84E-03	2.10E+00	1.35E-03	6.30E+00	4.51E-04	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	2.05E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.86E-06	0.00E+00	0.00E+00	1.93E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.95E-04	2.40E-01	8.14E-04	2.40E+00	8.14E-05	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	1.63E-01	mg/kg	1.00E+00			3.00E-01	NA	2.34E+01	2.34E+01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	2.28E-03	0.00E+00	0.00E+00	5.26E-03	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.54E-03	8.50E+00	8.87E-04	2.55E+01	2.96E-04	0.00%	0.00%
Selenium	0.00E+00	mg/L	7.51E-01	mg/kg	5.94E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.07E+00	4.92E-01	4.81E-01	4.81E-01	1.51E-01	1.51E-01	0.00E+00	0.00E+00	8.29E-03	0.00E+00	0.00E+00	6.81E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.64E-02	2.00E-01	3.82E-01	3.30E-01	2.32E-01	0.04%	0.05%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	2.95E-01	0.00E+00	0.00E+00	1.98E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.93E-01	2.63E+02	1.87E-03	7.89E+02	6.25E-04	0.00%	0.00%
Sulfate	5.14E+00	mg/L	1.39E+01	mg/kg	2.41E+02	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	1.13E+00	0.00E+00	3.36E+00	0.00E+00	0.00E+00	7.76E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.22E+01	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	6.14E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.40E-03	0.00E+00	7.40E-02	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Vanadium	2.64E-02	mg/L	0.00E+00	mg/kg	2.08E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	5.81E-03	0.00E+00	2.91E-01	0.00E+00	0.00E+00	9.39E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.91E-01	2.10E-01	1.86E+00	2.10E+00	1.86E-01	0.19%	0.04%
Zinc	0.00E+00	mg/L	3.22E+01	mg/kg	4.15E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	6.99E+00	1.05E+00	9.42E-01	9.42E-01	1.84E-01	1.84E-01	0.00E+00	0.00E+00	5.79E-01	0.00E+00	0.00E+00	3.11E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.17E+01	1.60E+02	1.98E-01	3.20E+02	9.91E-02	0.02%	0.02%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	8.7E+02	4.5E+02	87.54%	96.49%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.5E-01	7.5E-02	0.02%	0.02%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	3.0E-03	6.0E-04	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.3E-01	1.3E-02	0.01%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	2.6E-02	8.9E-03	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	3.5E-03	3.5E-04	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi x Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	1	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.000209	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.001611	kg/d
Body weight =	0.015	kg
Home range =	0.963707	acres
Water intake rate =	0.0033	L/d
Site Area =	486	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-165
Tier 1 COPCs
EEQs and Hazard Indices for the Red Fox at LHAAP
Waste Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Total Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							-----Unitless-----									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E+01	mg/kg	#######			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.62E-02	0.00E+00	0.00E+00	2.26E-01	0.00E+00	6.19E-01	0.00E+00	4.65E-01	9.96E-02	1.43E+00	2.68E+00	5.32E-01	1.33E+01	1.07E-01	0.47%	0.20%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.24E+00	mg/kg	#######			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.17E-03	0.00E+00	0.00E+00	1.65E-02	0.00E+00	2.68E-02	0.00E+00	3.38E-02	7.23E-03	8.54E-02	1.13E-01	7.56E-01	2.64E-01	3.24E-01	0.67%	0.61%
2,3,7,8-TCDD TEQ	1.22E-08	mg/L	8.87E-06	mg/kg	3.40E-05	mg/kg	#######	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	1.03E-09	0.00E+00	3.23E-08	0.00E+00	0.00E+00	7.67E-07	0.00E+00	6.27E-10	0.00E+00	4.90E-08	1.05E-08	8.60E-07	1.00E-06	8.60E-01	1.00E-05	8.60E-02	0.76%	0.16%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	2.87E+02	mg/kg	#######			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.72E-01	0.00E+00	0.00E+00	3.88E+00	0.00E+00	3.72E-01	0.00E+00	7.82E+00	1.68E+00	1.40E+01	2.00E-01	7.01E+01	3.00E-01	4.67E+01	61.64%	87.42%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	1.01E+02	mg/kg	#######			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	9.56E-02	0.00E+00	0.00E+00	1.37E+00	0.00E+00	1.14E+00	0.00E+00	2.75E+00	5.89E-01	5.94E+00	2.00E-01	2.97E+01	1.50E+00	3.96E+00	26.14%	7.41%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	1.36E+01	mg/kg	#######			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.29E-02	0.00E+00	0.00E+00	1.85E-01	0.00E+00	1.31E-01	0.00E+00	3.71E-01	7.95E-02	7.79E-01	2.00E-01	3.90E+00	6.00E-01	1.30E+00	3.43%	2.43%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	5.15E-04	mg/kg	#######		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.88E-07	0.00E+00	0.00E+00	8.11E-06	0.00E+00	1.67E-07	0.00E+00	1.40E-05	3.01E-06	2.58E-05	8.00E-01	3.23E-05	4.00E+00	6.45E-06	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	2.45E-03	mg/kg	#######		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	2.32E-06	0.00E+00	0.00E+00	3.88E-05	0.00E+00	6.17E-06	0.00E+00	5.77E-05	1.24E-05	1.17E-04	8.00E-01	1.47E-04	4.00E+00	2.93E-05	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.93E-04	mg/kg	#######		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	0.00E+00	2.77E-07	0.00E+00	0.00E+00	4.77E-06	0.00E+00	9.49E-08	0.00E+00	1.15E-05	2.47E-06	1.91E-05	8.00E-01	2.39E-05	4.00E+00	4.78E-06	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.13E-04	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.02E-07	0.00E+00	0.00E+00	3.40E-06	0.00E+00	3.48E-08	0.00E+00	5.81E-06	1.24E-06	1.07E-05	4.58E+00	2.33E-06	9.16E+00	1.17E-06	0.00%	0.00%
Aluminum	6.11E+00	mg/L	9.69E+03	mg/kg	9.30E+03	mg/kg	#######	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	5.16E-01	0.00E+00	8.81E+00	0.00E+00	0.00E+00	1.11E+00	0.00E+00	8.67E-02	0.00E+00	1.90E+00	4.08E-01	1.28E+01	1.93E+00	6.65E+00	1.93E+01	6.65E-01	5.85%	1.24%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	8.22E-01	mg/kg	#######			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	7.79E-04	0.00E+00	0.00E+00	9.49E-04	0.00E+00	2.33E-04	0.00E+00	3.23E-03	6.92E-04	5.88E-03	1.25E-01	4.71E-02	1.25E+00	4.71E-03	0.04%	0.01%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.08E-03	mg/kg	#######			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.92E-06	0.00E+00	0.00E+00	4.94E-05	0.00E+00	2.04E-06	0.00E+00	8.39E-05	1.80E-05	1.56E-04	6.85E-02	2.28E-03	6.85E-01	2.28E-04	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.90E-01	0.00E+00	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	6.24E-03	mg/kg	#######		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	0.00E+00	5.91E-06	0.00E+00	0.00E+00	1.03E-04	0.00E+00	2.24E-07	0.00E+00	1.57E-04	3.36E-05	2.99E-04	6.80E-02	4.40E-03	6.90E-01	4.33E-04	0.00%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	2.60E-03	mg/kg	#######			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	2.46E-06	0.00E+00	0.00E+00	4.50E-05	0.00E+00	4.79E-08	0.00E+00	1.18E-04	2.53E-05	1.91E-04	6.80E-02	2.81E-03	6.90E-01	2.77E-04	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.90E-01	0.00E+00	0.00%	0.00%
Barium	0.00E+00	mg/L	1.32E+02	mg/kg	5.53E+02	mg/kg	#######	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	0.00E+00	5.24E-01	0.00E+00	0.00E+00	8.96E-02	0.00E+00	2.06E+00	0.00E+00	4.33E-01	9.28E-02	3.20E+00	5.10E+00	6.28E-01	1.98E+01	1.62E-01	0.55%	0.30%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	5.43E-01	mg/kg	#######			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	5.14E-04	0.00E+00	0.00E+00	8.20E-03	0.00E+00	1.36E-04	0.00E+00	1.48E-02	3.17E-03	2.68E-02	1.59E+01	1.69E-03	4.70E+01	5.71E-04	0.00%	0.00%
Cadmium	2.49E-03	mg/L	5.48E-01	mg/kg	6.67E-01	mg/kg	#######	1.63E+03	7.99E+00	2.01E+01	8.11E-01	7.42E-01	7.42E-01	9.22E-01	9.22E-01	2.10E-04	0.00E+00	6.32E-04	0.00E+00	0.00E+00	1.36E-02	0.00E+00	2.01E-03	0.00E+00	1.46E-02	3.12E-03	3.41E-02	1.00E+00	3.41E-02	1.00E+01	3.41E-03	0.03%	0.01%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.72E+01	mg/kg	#######	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	0.00E+00	0.00E+00	1.62E-02	0.00E+00	0.00E+00	5.50E-02	0.00E+00	3.34E-02	0.00E+00	1.35E-01	2.90E-02	2.69E-01	3.28E+00	8.19E-02	1.31E+01	2.04E-02	0.07%	0.04%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Copper	1.18E-02	mg/L	7.20E+00	mg/kg	1.15E+01	mg/kg	#######	5.92E+03	5.25E+00	9.45E-01	5.86E-01	4.40E-01	4.40E-01	1.49E-01	1.49E-01	9.97E-04	0.00E+00	1.09E-02	0.00E+00	0.00E+00	1.10E-02	0.00E+00	2.05E-02	0.00E+00	4.06E-02	8.71E-03	9.28E-02	1.17E+01	7.93E-03	1.51E+01	6.13E-03	0.01%	0.01%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-02	0.00E+00	2.00E-01	0.00E+00	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	4.91E-04	mg/kg	#######			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	4.65E-07	0.00E+00	0.00E+00	7.59E-06	0.00E+00	7.60E-08	0.00E+00	1.41E-05	3.02E-06	2.53E-05	9.20E-02	2.75E-04	9.20E-01	2.75E-05	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E-01	mg/kg	#######			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.04E-04	0.00E+00	0.00E+00	1.73E-03	0.00E+00	8.41E-06	0.00E+00	2.99E-03	6.42E-04	5.48E-03	8.00E-02	6.84E-02	2.90E-01	1.89E-02	0.06%	0.04%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	1.36E+00	mg/kg	#######			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.29E-03	0.00E+00	0.00E+00	1.75E-02	0.00E+00	4.61E-02	0.00E+00	3.70E-02	7.92E-03	1.10E-01	1.00E+00	1.10E-01	5.00E+00	2.20E-02	0.10%	0.04%
Iron	5.98E+00	mg/L	0.00E+00	mg/kg	1.42E+04	mg/kg	#######	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	5.05E-01	0.00E+00	1.35E+01	0.00E+00	0.00E+00	1.12E+00	0.00E+00	2.30E-01	0.00E+00	6.95E-01	1.49E-01	1.62E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	#######		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	5.18E-03	mg/L	0.00E+00	mg/kg	5.58E+01	mg/kg	#######	1.50E+03	6.07E-01	3.78E-01	NA	4.51E-02	4.51E-02	1.33E-02	1.33E-02	4.37E-04	0.00E+00	5.28E-02	0.00E+00	0.00E+00	2.13E-02	NA	1.02E-02	0.00E+00	1.75E-02	3.76E-03	1.06E-01	8.00E+00	1.33E-02	8.00E+01	1.33E-03	0.01%	0.00%
Manganese	4.54E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	2.00E+03	2.10E+00	NA	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	3.84E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.84E-02	8.80E+01	4.36E-04	2.84E+02	1.35E-04	0.00%	0.00%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	9.67E-02	mg/kg	#######		2.87E+00	5.17E+00	NA	1.08E+00	1.08E+00	1.03E-01	1.03E-01	0.00E+00	0.00E+00	9.16E-05	0.00E+00	0.00E+00	5.07E-04	NA	4.22E-04	0.00E+00	2.35E-04	5.04E-05	1.31E-03	1.00E+00	1.31E-03	3.00E+00	4.35E-04	0.00%	0.00%
Mercury (methyl)	0.00E+00	mg/L	9.58E-02	mg/kg	0.00E+00	mg/kg	#######		2.87E+00	NA	1.08E+00	NA	NA			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	1.50E-02	0.00E+00	2.50E-02	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.89E-04	mg/kg	#######			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.74E-07	0.00E+00	0.00E+00	4.75E-06	0.00E+00	4.03E-08	0.00E+00	7.88E-06	1.69E-06	1.46E-05	7.00E-02	2.09E-04	7.00E-01	2.09E-05	0.00%	0.00%
Nickel	0.00E+00	mg/L	9.33E+00	mg/kg	8.42E+00	mg/kg	#######		2.32E+00	4.73E+00	6.21E-02	6.38E-02	6.38E-02	1.01E-01	1.01E-01	0.00E+00	0.00E+00	7.97E-03	0.00E+00	0.00E+00	4.03E-02	0.00E+00	2.18E-03	0.00E+00	2.01E-02	4.31E-03	7.49E-02	4.00E+01	1.87E-03	8.00E+01	9.37E-04	0.00%	0.00%
Nitrate	8.67E-01	mg/L	1.30E-01	mg/kg	1.34E+00	mg/kg	#######	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	7.32E-02	0.00E+00	1.27E-03	0.00E+00	0.00E+00	1.55E-03	0.00E+00	1.90E-03	0.00E+00	5.26E-03	1.13E-03	8.43E-02	5.07E+02	1.66E-04	1.13E+03	7.46E-05	0.00%	0.00%
Nitrate/Nitrite	7.06E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	1.07E+03								5.96E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.96E-03	5.07E+02	1.18E-05	1.13E+03	5.28E-06	0.00%	0.00%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	4.40E-03	mg/kg	#######			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.17E-06	0.00E+00	0.00E+00	6.43E-05	0.00E+00	3.37E-06	0.00E+00	1.20E-04	2.57E-05	2.17E-04	2.10E+00	1.04E-04	6.30E+00	3.45E-05	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	2.58E-04	mg/kg	#######			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.44E-07	0.00E+00	0.00E+00	3.96E-06	0.00E+00	3.50E-08	0.00E+00	7.02E-06	1.50E-06	1.28E-05	2.40E-01	5.32E-05	2.40E+00	5.32E-06	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.61E-01	mg/kg	#######			1.14E+00	NA	1.93E+01	1.93E+01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	2.47E-04	0.00E+00	0.00E+00	3.01E-04	NA	2.04E-02	0.00E+00	1.02E-03	2.20E-04	2.22E-02	8.50E+00	2.62E-03	2.55E+01	8.72E-04	0.00%	0.00%
Selenium	0.00E+00	mg/L	8.67E-01	mg/kg	6.71E-01	mg/kg	#######	2.05E+02	4.50E+00	1.03E+00	4.99E-01	4.87E-01	4.87E-01	1.95E-01	1.95E-01	0.00E+00	0.00E+00	6.36E-04	0.00E+00	0.00E+00	7.03E-04	0.00E+00	1.32E-03	0.00E+00	3.10E-03	6.63E-04	6.42E-03	2.00E-01	3.21E-02	3.30E-01	1.95E-02	0.03%	0.04%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.71E+01	mg/kg	#######		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	2.57E-02	0.00E+00	0.00E+00	7.63E-03	0.00E+00	3.84E-02	0.00E+00	1.06E-01	2.28E-02	2.01E-01	2.63E+02	7.65E-04	7.89E+02	2.55E-04	0.00%	0.00%
Sulfate	6.09E+00	mg/L	2.00E+01	mg/kg	4.00E+02	mg/kg	#######	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	5.14E-01	0.00E+00	3.79E-01	0.00E+00	0.00E+00	4.62E-01	0.00E+00	5.67E-01	0.00E+00	1.57E+00	3.37E-01	3.83E+00	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	7.12E-01	mg/kg	0.00E+00	mg/kg	#######	1.59E+04	4.50E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.40E-03	0.00E+00	7.40E-02	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Vanadium	3.33E-02	mg/L	0.00E+00	mg/kg	2.36E+01	mg/kg	#######	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	2.81E-03	0.00E+00	2.24E-02	0.00E+00	0.00E+00	2.10E-03	0.00E+00	3.83E-04	0.00E+00	3.30E-03	7.08E-04	3.17E-02	2.10E-01	1.51E-01	2.10E+00	1.51E-02	0.13%	0.03%
Zinc	0.00E+00	mg/L	3.82E+01	mg/kg	5.17E+01	mg/kg	#######	5.00E+03	7.53E+00	6.03E+00	9.78E-01	8.56E-01	8.56E-01	4.51E-01	4.51E-01	0.00E+00	0.00E+00	4.90E-02	0.00E+00	0.00E+00	3.16E-01	0.00E+00	1.79E-01	0.00E+00	5.51E-01	1.18E-01	1.21E+00	1.60E+02	7.58E-03	3.20E+02	3.79E-03	0.01%	0.01%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	1.0E+02	5.2E+01	91.20%	97.26%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	2.3E-06	1.2E-06	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	2.0E-04	4.1E-05	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	9.5E-03	9.4E-04	0.01%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	1.7E-03	5.7E-04	0.01%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	2.7E-04	2.7E-05	0.00%	0.00%

Intake Equation:

$$E_j = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0.12	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0.03	unitless
Mammal diet fraction =	0.7	unitless
Bird diet fraction =	0.15	unitless
Soil ingestion rate =	0.004263	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.152	kg/d
Body weight =	4.5	kg
Home range =	247.1044	acres
Water intake rate =	0.38	L/d
Site Area =	486	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-166
Tier 2 COPCs
EEQs and Hazard Indices for the Red Fox at LHAAP
Waste Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Total Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							----------	----------	----------	----------Unitless	----------	----------	----------	----------		mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.26E+01	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.26E-03	0.00E+00	0.00E+00	1.82E-02	0.00E+00	5.43E-02	0.00E+00	4.94E-02	1.06E-02	1.35E-01	2.68E+00	5.03E-02	1.33E+01	1.01E-02	0.59%	0.27%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.14E+00	mg/kg	1.00E+00			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.04E-04	0.00E+00	0.00E+00	1.66E-03	0.00E+00	3.86E-03	0.00E+00	4.47E-03	9.57E-04	1.11E-02	1.13E-01	9.86E-02	2.64E-01	4.22E-02	1.17%	1.12%
2,3,7,8-TCDD TEQ	1.07E-08	mg/L	5.59E-06	mg/kg	2.05E-05	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	1.71E-10	0.00E+00	3.68E-09	0.00E+00	0.00E+00	4.34E-08	0.00E+00	6.11E-11	0.00E+00	4.35E-09	9.32E-10	5.26E-08	1.00E-06	5.26E-02	1.00E-05	5.26E-03	0.62%	0.14%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	1.48E+02	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.66E-02	0.00E+00	0.00E+00	2.19E-01	0.00E+00	1.82E-02	0.00E+00	5.82E-01	1.25E-01	9.71E-01	2.00E-01	4.85E+00	3.00E-01	3.24E+00	57.42%	85.57%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	5.04E+01	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	9.04E-03	0.00E+00	0.00E+00	7.49E-02	0.00E+00	8.23E-02	0.00E+00	1.98E-01	4.24E-02	4.07E-01	2.00E-01	2.03E+00	1.50E+00	2.71E-01	24.05%	7.17%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	7.15E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.28E-03	0.00E+00	0.00E+00	1.06E-02	0.00E+00	1.17E-02	0.00E+00	2.81E-02	6.02E-03	5.77E-02	2.00E-01	2.88E-01	6.00E-01	9.61E-02	3.41%	2.54%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	3.62E-04	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	6.50E-08	0.00E+00	0.00E+00	6.22E-07	0.00E+00	7.79E-09	0.00E+00	1.42E-06	3.05E-07	2.42E-06	8.00E-01	3.03E-06	4.00E+00	6.05E-07	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.86E-03	mg/kg	1.00E+00		4.75E+00	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	3.33E-07	0.00E+00	0.00E+00	3.21E-06	0.00E+00	1.94E-07	0.00E+00	7.84E-06	1.68E-06	1.33E-05	8.00E-01	1.66E-05	4.00E+00	3.31E-06	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.21E-04	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	3.96E-08	0.00E+00	0.00E+00	3.93E-07	0.00E+00	4.75E-09	0.00E+00	8.77E-07	1.88E-07	1.50E-06	8.00E-01	1.88E-06	4.00E+00	3.76E-07	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	6.95E-01	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.25E-04	0.00E+00	0.00E+00	1.21E-03	0.00E+00	4.98E-06	0.00E+00	2.73E-03	5.85E-04	4.66E-03	4.58E+00	1.02E-03	9.16E+00	5.08E-04	0.01%	0.01%
Aluminum	4.16E+00	mg/L	8.09E+03	mg/kg	8.02E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	6.65E-02	0.00E+00	1.44E+00	0.00E+00	0.00E+00	6.62E-02	0.00E+00	9.24E-03	0.00E+00	2.38E-01	5.10E-02	1.87E+00	1.93E+00	9.70E-01	1.93E+01	9.70E-02	11.47%	2.56%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	6.95E-01	mg/kg	1.00E+00			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	1.25E-04	0.00E+00	0.00E+00	4.00E-05	0.00E+00	1.97E-05	0.00E+00	3.45E-04	7.39E-05	6.03E-04	1.25E-01	4.83E-03	1.25E+00	4.83E-04	0.06%	0.01%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.09E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.75E-07	0.00E+00	0.00E+00	3.66E-06	0.00E+00	1.35E-08	0.00E+00	8.21E-06	1.76E-06	1.40E-05	6.85E-02	2.05E-04	6.85E-01	2.05E-05	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.90E-01	0.00E+00	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.33E-03	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	7.78E-07	0.00E+00	0.00E+00	7.78E-06	0.00E+00	1.19E-08	0.00E+00	9.66E-06	2.07E-06	2.03E-05	6.80E-02	2.99E-04	6.90E-01	2.94E-05	0.00%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.97E-03	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	3.54E-07	0.00E+00	0.00E+00	3.73E-06	0.00E+00	9.75E-10	0.00E+00	1.48E-05	3.17E-06	2.20E-05	6.80E-02	3.24E-04	6.90E-01	3.19E-05	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.90E-01	0.00E+00	0.00%	0.00%
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	4.81E+02	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	0.00E+00	8.64E-02	0.00E+00	0.00E+00	8.41E-03	0.00E+00	5.77E-02	0.00E+00	4.32E-02	9.25E-03	2.05E-01	5.10E+00	4.02E-02	1.98E+01	1.03E-02	0.48%	0.27%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	4.45E-01	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	7.98E-05	0.00E+00	0.00E+00	7.34E-04	0.00E+00	1.92E-05	0.00E+00	1.75E-03	3.74E-04	2.95E-03	1.59E+01	1.86E-04	4.70E+01	6.29E-05	0.00%	0.00%
Cadmium	2.09E-03	mg/L	4.57E-01	mg/kg	5.66E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	2.17E+01	8.80E-01	7.99E-01	7.99E-01	6.72E-01	6.72E-01	3.34E-05	0.00E+00	1.02E-04	0.00E+00	0.00E+00	2.36E-03	0.00E+00	3.48E-04	0.00E+00	1.71E-03	3.65E-04	4.91E-03	1.00E+00	4.91E-03	1.00E+01	4.91E-04	0.06%	0.01%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.57E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	0.00E+00	0.00E+00	2.83E-03	0.00E+00	0.00E+00	9.25E-04	0.00E+00	4.96E-04	0.00E+00	5.97E-03	1.28E-03	1.15E-02	3.28E+00	3.50E-03	1.31E+01	8.75E-04	0.04%	0.02%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Copper	9.31E-03	mg/L	6.17E+00	mg/kg	9.30E+00	mg/kg	1.00E+00	1.11E+03	1.56E+00	1.11E+00	6.44E-01	5.01E-01	5.01E-01	8.97E-02	8.97E-02	1.49E-04	0.00E+00	1.67E-03	0.00E+00	0.00E+00	1.98E-03	0.00E+00	3.58E-03	0.00E+00	3.74E-03	8.01E-04	1.19E-02	1.17E+01	1.02E-03	1.51E+01	7.87E-04	0.01%	0.02%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-02	0.00E+00	2.00E-01	0.00E+00	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.35E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	6.01E-08	0.00E+00	0.00E+00	5.66E-07	0.00E+00	7.05E-09	0.00E+00	1.82E-06	3.90E-07	2.84E-06	9.20E-02	3.09E-05	9.20E-01	3.09E-06	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	6.30E-02	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.13E-05	0.00E+00	0.00E+00	1.08E-04	0.00E+00	7.69E-07	0.00E+00	2.47E-04	5.30E-05	4.21E-04	8.00E-02	5.26E-03	2.90E-01	1.45E-03	0.06%	0.04%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	1.00E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.80E-04	0.00E+00	0.00E+00	1.41E-03	0.00E+00	6.44E-03	0.00E+00	3.93E-03	8.42E-04	1.28E-02	1.00E+00	1.28E-02	5.00E+00	2.56E-03	0.15%	0.07%
Iron	4.18E+00	mg/L	0.00E+00	mg/kg	1.27E+04	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	6.68E-02	0.00E+00	2.28E+00	0.00E+00	0.00E+00	8.79E-02	0.00E+00	3.91E-02	0.00E+00	1.00E-01	2.15E-02	2.60E+00	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	4.09E-03	mg/L	0.00E+00	mg/kg	4.62E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	3.91E-01	NA	4.90E-02	4.90E-02	1.16E-02	1.16E-02	6.54E-05	0.00E+00	8.29E-03	0.00E+00	0.00E+00	3.47E-03	NA	1.74E-03	0.00E+00	2.41E-03	5.16E-04	1.65E-02	8.00E+00	2.06E-03	8.00E+01	2.06E-04	0.02%	0.01%
Manganese	3.17E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.50E+02	4.20E-01	NA	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	5.07E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.07E-03	8.80E+01	5.76E-05	2.84E+02	1.78E-05	0.00%	0.00%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	8.59E-02	mg/kg	1.00E+00		1.14E+00	5.60E+00	NA	1.14E+00	1.14E+00	9.15E-02	9.15E-02	0.00E+00	0.00E+00	1.54E-05	0.00E+00	0.00E+00	9.23E-05	NA	7.50E-05	0.00E+00	3.52E-05	7.54E-06	2.26E-04	1.00E+00	2.26E-04	3.00E+00	7.52E-05	0.00%	0.00%
Mercury (methyl)	0.00E+00	mg/L	8.35E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	1.15E+00	NA	NA			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	1.50E-02	0.00E+00	2.50E-02	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-04	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.28E-08	0.00E+00	0.00E+00	4.28E-07	0.00E+00	6.29E-10	0.00E+00	9.36E-07	2.01E-07	1.61E-06	7.00E-02	2.30E-05	7.00E-01	2.30E-06	0.00%	0.00%
Nickel	0.00E+00	mg/L	8.12E+00	mg/kg	7.73E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	6.43E-02	6.51E-02	6.51E-02	8.71E-02	8.71E-02	0.00E+00	0.00E+00	1.39E-03	0.00E+00	0.00E+00	1.57E-03	0.00E+00	3.87E-04	0.00E+00	3.01E-03	6.46E-04	7.01E-03	4.00E+01	1.75E-04	8.00E+01	8.76E-05	0.00%	0.00%
Nitrate	4.79E-01	mg/L	9.50E-02	mg/kg	1.00E+00	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	7.66E-03	0.00E+00	1.80E-04	0.00E+00	0.00E+00	5.77E-05	0.00E+00	1.61E-04	0.00E+00	4.97E-04	1.06E-04	8.66E-03	5.07E+02	1.71E-05	1.13E+03	7.67E-06	0.00%	0.00%
Nitrate/Nitrite	5.55E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02								8.88E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.88E-04	5.07E+02	1.75E-06	1.13E+03	7.86E-07	0.00%	0.00%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	3.13E-03	mg/kg	1.00E+00			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	5.61E-07	0.00E+00	0.00E+00	5.00E-06	0.00E+00	3.97E-07	0.00E+00	1.23E-05	2.63E-06	2.09E-05	2.10E+00	9.94E-06	6.30E+00	3.31E-06	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	2.05E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.68E-08	0.00E+00	0.00E+00	3.44E-07	0.00E+00	4.31E-09	0.00E+00	8.04E-07	1.72E-07	1.36E-06	2.40E-01	5.67E-06	2.40E+00	5.67E-07	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	1.63E-01	mg/kg	1.00E+00			3.00E-01	NA	2.34E+01	2.34E+01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	2.93E-05	0.00E+00	0.00E+00	9.40E-06	NA	2.94E-03	0.00E+00	8.10E-05	1.74E-05	3.08E-03	8.50E+00	3.62E-04	2.55E+01	1.21E-04	0.00%	0.00%
Selenium	0.00E+00	mg/L	7.51E-01	mg/kg	5.94E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.07E+00	4.92E-01	4.81E-01	4.81E-01	1.51E-01	1.51E-01	0.00E+00	0.00E+00	1.07E-04	0.00E+00	0.00E+00	1.22E-04	0.00E+00	2.19E-04	0.00E+00	4.02E-04	8.61E-05	9.36E-04	2.00E-01	4.68E-03	3.30E-01	2.83E-03	0.06%	0.07%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	3.80E-03	0.00E+00	0.00E+00	3.53E-04	0.00E+00	3.41E-03	0.00E+00	1.05E-02	2.25E-03	2.03E-02	2.63E+02	7.72E-05	7.89E+02	2.57E-05	0.00%	0.00%
Sulfate	5.14E+00	mg/L	1.39E+01	mg/kg	2.41E+02	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	8.22E-02	0.00E+00	4.32E-02	0.00E+00	0.00E+00	1.39E-02	0.00E+00	3.88E-02	0.00E+00	1.19E-01	2.56E-02	3.23E-01	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	6.14E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.40E-03	0.00E+00	7.40E-02	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Vanadium	2.64E-02	mg/L	0.00E+00	mg/kg	2.08E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	4.22E-04	0.00E+00	3.74E-03	0.00E+00	0.00E+00	1.68E-04	0.00E+00	5.76E-05	0.00E+00	5.12E-04	1.10E-04	5.01E-03	2.10E-01	2.38E-02	2.10E+00	2.38E-03	0.28%	0.06%
Zinc	0.00E+00	mg/L	3.22E+01	mg/kg	4.15E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	6.99E+00	1.05E+00	9.42E-01	9.42E-01	1.84E-01	1.84E-01	0.00E+00	0.00E+00	7.45E-03	0.00E+00	0.00E+00	5.57E-02	0.00E+00	3.00E-02	0.00E+00	3.42E-02	7.34E-03	1.35E-01	1.60E+02	8.42E-04	3.20E+02	4.21E-04	0.01%	0.01%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	7.2E+00	3.6E+00	84.88%	95.28%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.0E-03	5.1E-04	0.01%	0.01%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	2.1E-05	4.3E-06	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	8.3E-04	8.2E-05	0.01%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	1.9E-04	6.3E-05	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	3.1E-05	3.1E-06	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\,x\,Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0.12	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0.03	unitless
Mammal diet fraction =	0.7	unitless
Bird diet fraction =	0.15	unitless
Soil ingestion rate =	0.004263	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.152	kg/d
Body weight =	4.5	kg
Home range =	2565	acres
Water intake rate =	0.38	L/d
Site Area =	486	acres
Area Use Factor (AUF) =	0.189474	unitless
Exposure Duration (ED) =	1	unitless

Table E-167
Tier 1 COPCs
EEQs and Hazard Indices for the Muskrat at LHAAP
Waste Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							---Unitless---									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	8.46E+00	mg/kg	#######			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.56E-01	0.00E+00	0.00E+00	0.00E+00	5.56E-01	2.68E+00	2.07E-01	1.33E+01	4.18E-02	0.44%	0.48%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-01	mg/kg	#######			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.30E-03	0.00E+00	0.00E+00	0.00E+00	9.30E-03	1.13E-01	8.23E-02	2.64E-01	3.52E-02	0.18%	0.41%
2,3,7,8-TCDD TEQ	1.22E-08	mg/L	8.87E-06	mg/kg	7.33E-05	mg/kg	#######	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	1.18E-09	6.11E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E-09	2.44E-09	1.33E-09	0.00E+00	0.00E+00	6.74E-08	1.00E-06	6.74E-02	1.00E-05	6.74E-03	0.14%	0.08%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	4.91E+02	mg/kg	#######			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	1.15E+00	2.00E-01	5.76E+00	3.00E-01	3.84E+00	12.36%	44.28%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	1.23E+00	mg/kg	#######			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-02	0.00E+00	0.00E+00	0.00E+00	2.50E-02	2.00E-01	1.25E-01	1.50E+00	1.67E-02	0.27%	0.19%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	2.40E+00	mg/kg	#######			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.17E-02	0.00E+00	0.00E+00	0.00E+00	4.17E-02	2.00E-01	2.09E-01	6.00E-01	6.95E-02	0.45%	0.80%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	6.15E-04	mg/kg	#######		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.61E-07	0.00E+00	0.00E+00	0.00E+00	3.61E-07	8.00E-01	4.51E-07	4.00E+00	9.02E-08	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	2.06E-03	mg/kg	#######		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.36E-06	0.00E+00	0.00E+00	0.00E+00	9.36E-06	8.00E-01	1.17E-05	4.00E+00	2.34E-06	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.85E-04	mg/kg	#######		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.67E-07	0.00E+00	0.00E+00	0.00E+00	1.67E-07	8.00E-01	2.09E-07	4.00E+00	4.18E-08	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.90E-04	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.57E-08	0.00E+00	0.00E+00	0.00E+00	8.57E-08	4.58E+00	1.87E-08	9.16E+00	9.36E-09	0.00%	0.00%
Aluminum	6.11E+00	mg/L	9.69E+03	mg/kg	9.02E+03	mg/kg	#######	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	5.93E-01	6.68E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.36E-01	1.52E-01	7.36E-01	0.00E+00	0.00E+00	6.90E+01	1.93E+00	3.58E+01	1.93E+01	3.58E+00	76.72%	41.24%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.57E+00	mg/kg	#######			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.32E-03	0.00E+00	0.00E+00	0.00E+00	1.32E-03	1.25E-01	1.05E-02	1.25E+00	1.05E-03	0.02%	0.01%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.34E-03	mg/kg	#######			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E-06	0.00E+00	0.00E+00	0.00E+00	4.00E-06	6.85E-02	5.84E-05	6.85E-01	5.84E-06	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.80E-01	0.00E+00	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	5.97E-03	mg/kg	#######		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.87E-07	0.00E+00	0.00E+00	0.00E+00	3.87E-07	6.80E-02	5.70E-06	6.80E-01	5.70E-07	0.00%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	2.66E-03	mg/kg	#######			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.86E-08	0.00E+00	0.00E+00	0.00E+00	8.86E-08	6.80E-02	1.30E-06	6.80E-01	1.30E-07	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.80E-01	0.00E+00	0.00%	0.00%
Barium	0.00E+00	mg/L	1.32E+02	mg/kg	1.01E+03	mg/kg	#######	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	9.12E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E+00	6.82E+00	4.02E+00	0.00E+00	0.00E+00	1.58E+01	5.10E+00	3.09E+00	1.98E+01	7.96E-01	6.63%	9.18%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	2.49E-03	mg/L	5.48E-01	mg/kg	5.20E-01	mg/kg	#######	1.63E+03	7.99E+00	2.25E+01	8.11E-01	8.31E-01	8.11E-01	9.22E-01	9.22E-01	2.42E-04	3.78E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.47E-02	3.17E-03	1.47E-02	0.00E+00	0.00E+00	3.65E-02	1.00E+00	3.65E-02	1.00E+01	3.65E-03	0.08%	0.04%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.61E+01	mg/kg	#######	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.65E-02	0.00E+00	0.00E+00	0.00E+00	5.65E-02	3.28E+00	1.72E-02	1.31E+01	4.30E-03	0.04%	0.05%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Copper	1.18E-02	mg/L	7.20E+00	mg/kg	1.37E+01	mg/kg	#######	5.92E+03	5.25E+00	8.28E-01	5.86E-01	3.96E-01	5.86E-01	1.49E-01	1.49E-01	1.15E-03	4.96E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.39E-01	3.98E-02	1.39E-01	0.00E+00	0.00E+00	3.69E-01	1.17E+01	3.15E-02	1.51E+01	2.44E-02	0.07%	0.28%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-02	0.00E+00	2.00E-01	0.00E+00	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	4.39E-04	mg/kg	#######			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.23E-07	0.00E+00	0.00E+00	0.00E+00	1.23E-07	9.20E-02	1.34E-06	9.20E-01	1.34E-07	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.10E-01	mg/kg	#######			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.90E-05	0.00E+00	0.00E+00	0.00E+00	2.90E-05	8.00E-02	3.63E-04	2.90E-01	1.00E-04	0.00%	0.00%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+00	mg/kg	#######			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.76E-02	0.00E+00	0.00E+00	0.00E+00	8.76E-02	1.00E+00	8.76E-02	5.00E+00	1.75E-02	0.19%	0.20%
Iron	5.98E+00	mg/L	0.00E+00	mg/kg	1.28E+04	mg/kg	#######	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	5.80E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.75E-01	0.00E+00	0.00E+00	0.00E+00	9.56E-01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	#######		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	4.21E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.84E-02	0.00E+00	2.84E-02	0.00E+00	0.00E+00	5.71E-02	NA	NA	NA	NA	NA	NA
Lead	5.18E-03	mg/L	0.00E+00	mg/kg	7.44E+01	mg/kg	#######	1.50E+03	6.07E-01	3.57E-01	NA	3.97E-02	NA	1.33E-02	1.33E-02	5.03E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	2.17E-02	NA	0.00E+00	0.00E+00	2.22E-02	8.00E+00	2.77E-03	8.00E+01	2.77E-04	0.01%	0.00%
Manganese	4.54E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	2.00E+03	2.10E+00	NA	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	4.41E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.41E-02	8.80E+01	5.01E-04	2.84E+02	1.55E-04	0.00%	0.00%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E-01	mg/kg	#######		2.87E+00	4.75E+00	NA	1.02E+00	NA	1.03E-01	1.03E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	8.18E-04	NA	0.00E+00	0.00E+00	8.18E-04	1.32E+01	6.20E-05	3.96E+01	2.07E-05	0.00%	0.00%
Mercury (methyl)	0.00E+00	mg/L	9.58E-02	mg/kg	0.00E+00	mg/kg	#######		2.87E+00	NA	1.08E+00	NA	1.08E+00			0.00E+00	6.60E-04	0.00E+00	0.00E+00	0.00E+00	NA	3.42E-03	NA	3.42E-03	0.00E+00	0.00E+00	7.50E-03	3.20E-02	2.34E-01	1.60E-01	4.69E-02	0.50%	0.54%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.52E-04	mg/kg	#######			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.87E-08	0.00E+00	0.00E+00	0.00E+00	8.87E-08	7.00E-02	1.27E-06	7.00E-01	1.27E-07	0.00%	0.00%
Nickel	0.00E+00	mg/L	9.33E+00	mg/kg	7.49E+00	mg/kg	#######		2.32E+00	4.73E+00	6.21E-02	6.57E-02	6.21E-02	1.01E-01	1.01E-01	0.00E+00	6.43E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.91E-02	3.60E-03	1.91E-02	0.00E+00	0.00E+00	1.06E-01	4.00E+01	2.65E-03	8.00E+01	1.33E-03	0.01%	0.02%
Nitrate	8.67E-01	mg/L	1.30E-01	mg/kg	1.08E+00	mg/kg	#######	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	8.42E-02	8.94E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.50E-03	2.76E-03	1.50E-03	0.00E+00	0.00E+00	9.09E-02	5.07E+02	1.79E-04	1.13E+03	8.04E-05	0.00%	0.00%
Nitrate/Nitrite	7.06E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	1.07E+03								6.86E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.86E-03	5.07E+02	1.35E-05	1.13E+03	6.07E-06	0.00%	0.00%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	3.51E-03	mg/kg	#######			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.86E-06	0.00E+00	0.00E+00	0.00E+00	4.86E-06	2.10E+00	2.31E-06	6.30E+00	7.71E-07	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	2.98E-04	mg/kg	#######			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.31E-08	0.00E+00	0.00E+00	0.00E+00	7.31E-08	2.40E-01	3.05E-07	2.40E+00	3.05E-08	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	1.32E-01	mg/kg	#######			1.14E+00	NA	2.56E+01	2.56E+01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	2.48E-02	0.00E+00	0.00E+00	0.00E+00	2.48E-02	8.50E+00	2.92E-03	2.55E+01	9.72E-04	0.01%	0.01%
Selenium	0.00E+00	mg/L	8.67E-01	mg/kg	6.76E-01	mg/kg	#######	2.05E+02	4.50E+00	1.03E+00	4.99E-01	4.87E-01	4.99E-01	1.95E-01	1.95E-01	0.00E+00	5.97E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.43E-02	2.41E-03	1.43E-02	0.00E+00	0.00E+00	3.70E-02	2.00E-01	1.85E-01	3.30E-01	1.12E-01	0.40%	1.29%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	3.28E+01	mg/kg	#######		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.41E-02	0.00E+00	0.00E+00	0.00E+00	8.41E-02	2.63E+02	3.20E-04	7.89E+02	1.07E-04	0.00%	0.00%
Sulfate	6.09E+00	mg/L	2.00E+01	mg/kg	1.04E+02	mg/kg	#######	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	5.92E-01	1.38E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.31E-01	2.67E-01	2.31E-01	0.00E+00	0.00E+00	1.46E+00	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	7.12E-01	mg/kg	0.00E+00	mg/kg	#######	1.59E+04	4.50E+00							0.00E+00	4.91E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.91E-03	7.40E-03	6.63E-01	7.40E-02	6.63E-02	1.42%	0.76%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Vanadium	3.33E-02	mg/L	0.00E+00	mg/kg	2.15E+01	mg/kg	#######	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	3.23E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.29E-04	0.00E+00	0.00E+00	0.00E+00	3.86E-03	2.10E-01	1.84E-02	2.10E+00	1.84E-03	0.04%	0.02%
Zinc	0.00E+00	mg/L	3.82E+01	mg/kg	6.24E+01	mg/kg	#######	5.00E+03	7.53E+00	5.31E+00	9.78E-01	7.87E-01	9.78E-01	4.51E-01	4.51E-01	0.00E+00	2.63E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.23E+00	3.60E-01	1.23E+00	0.00E+00	0.00E+00	3.09E+00	1.60E+02	1.93E-02	3.20E+02	9.65E-03	0.04%	0.11%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	6.1E+00	3.9E+00	13.07%	45.27%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.9E-08	9.4E-09	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	1.2E-05	2.5E-06	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	6.5E-05	6.5E-06	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	1.3E-06	1.3E-07	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi x Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0.1	unitless
Aquatic plant diet fraction =	0.45	unitless
Plant root diet fraction =	0.45	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0.008093	kg/d
Food ingestion rate =	0.0861	kg/d
Body weight =	1.174	kg
Home range =	0.11861	acres
Water intake rate =	0.114	L/d
Site Area =	262	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-168
Tier 2 COPCs
EEQs and Hazard Indices for the Muskrat at LHAAP
Waste Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							---Unitless---									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	5.16E+00	mg/kg	#######			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.13E-01	0.00E+00	0.00E+00	0.00E+00	2.13E-01	2.68E+00	7.93E-02	1.33E+01	1.60E-02	0.24%	0.36%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.49E-01	mg/kg	#######			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.85E-03	0.00E+00	0.00E+00	0.00E+00	4.85E-03	1.13E-01	4.29E-02	2.64E-01	1.84E-02	0.13%	0.42%
2,3,7,8-TCDD TEQ	1.07E-08	mg/L	5.59E-06	mg/kg	3.16E-05	mg/kg	#######	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	1.04E-09	3.85E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.15E-10	8.99E-10	7.15E-10	0.00E+00	0.00E+00	4.19E-08	1.00E-06	4.19E-02	1.00E-05	4.19E-03	0.13%	0.10%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	2.47E+02	mg/kg	#######			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.89E-01	0.00E+00	0.00E+00	0.00E+00	2.89E-01	2.00E-01	1.45E+00	3.00E-01	9.64E-01	4.39%	22.02%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	5.56E-01	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.68E-03	0.00E+00	0.00E+00	0.00E+00	8.68E-03	2.00E-01	4.34E-02	1.50E+00	5.79E-03	0.13%	0.13%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	1.24E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.94E-02	0.00E+00	0.00E+00	0.00E+00	1.94E-02	2.00E-01	9.71E-02	6.00E-01	3.24E-02	0.29%	0.74%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	4.55E-04	mg/kg	#######		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.35E-08	0.00E+00	0.00E+00	0.00E+00	9.35E-08	8.00E-01	1.17E-07	4.00E+00	2.34E-08	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.48E-03	mg/kg	#######		4.75E+00	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.47E-06	0.00E+00	0.00E+00	0.00E+00	1.47E-06	8.00E-01	1.84E-06	4.00E+00	3.68E-07	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.98E-04	mg/kg	#######		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.07E-08	0.00E+00	0.00E+00	0.00E+00	4.07E-08	8.00E-01	5.09E-08	4.00E+00	1.02E-08	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.37E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.62E-08	0.00E+00	0.00E+00	0.00E+00	1.62E-08	4.58E+00	3.54E-09	9.16E+00	1.77E-09	0.00%	0.00%
Aluminum	4.16E+00	mg/L	8.09E+03	mg/kg	6.95E+03	mg/kg	#######	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	4.04E-01	5.58E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E-01	7.65E-02	4.00E-01	0.00E+00	0.00E+00	5.71E+01	1.93E+00	2.96E+01	1.93E+01	2.96E+00	89.72%	67.51%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.06E+00	mg/kg	#######			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.59E-04	0.00E+00	0.00E+00	0.00E+00	5.59E-04	1.25E-01	4.48E-03	1.25E+00	4.48E-04	0.01%	0.01%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.22E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.37E-07	0.00E+00	0.00E+00	0.00E+00	1.37E-07	6.85E-02	1.99E-06	6.85E-01	1.99E-07	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.80E-01	0.00E+00	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.21E-03	mg/kg	#######		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E-07	0.00E+00	0.00E+00	0.00E+00	1.10E-07	6.80E-02	1.62E-06	6.80E-01	1.62E-07	0.00%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.94E-03	mg/kg	#######			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.14E-09	0.00E+00	0.00E+00	0.00E+00	9.14E-09	6.80E-02	1.34E-07	6.80E-01	1.34E-08	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.80E-01	0.00E+00	0.00%	0.00%
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	5.33E+02	mg/kg	#######	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	8.14E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.08E-01	6.10E-01	6.08E-01	0.00E+00	0.00E+00	2.64E+00	5.10E+00	5.18E-01	1.98E+01	1.33E-01	1.57%	3.04%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	2.09E-03	mg/L	4.57E-01	mg/kg	4.73E-01	mg/kg	#######	1.15E+03	6.00E-01	2.35E+01	8.80E-01	8.67E-01	8.80E-01	6.72E-01	6.72E-01	2.02E-04	3.15E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E-02	3.00E-03	1.33E-02	0.00E+00	0.00E+00	3.29E-02	1.00E+00	3.29E-02	1.00E+01	3.29E-03	0.10%	0.08%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.46E+01	mg/kg	#######	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.40E-03	0.00E+00	0.00E+00	0.00E+00	4.40E-03	3.28E+00	1.34E-03	1.31E+01	3.35E-04	0.00%	0.01%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Copper	9.31E-03	mg/L	6.17E+00	mg/kg	1.09E+01	mg/kg	#######	1.11E+03	1.56E+00	9.82E-01	6.44E-01	4.54E-01	6.44E-01	8.97E-02	8.97E-02	9.04E-04	4.25E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.31E-01	3.64E-02	1.31E-01	0.00E+00	0.00E+00	3.42E-01	1.17E+01	2.92E-02	1.51E+01	2.26E-02	0.09%	0.52%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-02	0.00E+00	2.00E-01	0.00E+00	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.17E-04	mg/kg	#######			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.37E-08	0.00E+00	0.00E+00	0.00E+00	6.37E-08	9.20E-02	6.93E-07	9.20E-01	6.93E-08	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.52E-01	mg/kg	#######			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.77E-05	0.00E+00	0.00E+00	0.00E+00	1.77E-05	8.00E-02	2.22E-04	2.90E-01	6.11E-05	0.00%	0.00%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	1.03E+00	mg/kg	#######			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.35E-02	0.00E+00	0.00E+00	0.00E+00	6.35E-02	1.00E+00	6.35E-02	5.00E+00	1.27E-02	0.19%	0.29%
Iron	4.18E+00	mg/L	0.00E+00	mg/kg	1.12E+04	mg/kg	#######	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	4.05E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.28E-01	0.00E+00	0.00E+00	0.00E+00	7.34E-01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	#######		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	4.21E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.80E-02	0.00E+00	2.80E-02	0.00E+00	0.00E+00	5.64E-02	NA	NA	NA	NA	NA	NA
Lead	4.09E-03	mg/L	0.00E+00	mg/kg	4.77E+01	mg/kg	#######	4.48E+02	7.10E-02	3.89E-01	NA	4.83E-02	NA	1.16E-02	1.16E-02	3.97E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	1.69E-02	NA	0.00E+00	0.00E+00	1.73E-02	8.00E+00	2.16E-03	8.00E+01	2.16E-04	0.01%	0.00%
Manganese	3.17E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	2.50E+02	4.20E-01	NA	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	3.07E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.07E-02	8.80E+01	3.49E-04	2.84E+02	1.08E-04	0.00%	0.00%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	9.02E-02	mg/kg	#######		1.14E+00	5.42E+00	NA	1.11E+00	NA	9.15E-02	9.15E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	7.36E-04	NA	0.00E+00	0.00E+00	7.36E-04	1.32E+01	5.57E-05	3.96E+01	1.86E-05	0.00%	0.00%
Mercury (methyl)	0.00E+00	mg/L	8.35E-02	mg/kg	0.00E+00	mg/kg	#######		1.14E+00	NA	1.15E+00	NA	1.15E+00			0.00E+00	5.75E-04	0.00E+00	0.00E+00	0.00E+00	NA	3.18E-03	NA	3.18E-03	0.00E+00	0.00E+00	6.93E-03	3.20E-02	2.16E-01	1.60E-01	4.33E-02	0.66%	0.99%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.47E-04	mg/kg	#######			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.23E-09	0.00E+00	0.00E+00	0.00E+00	6.23E-09	7.00E-02	8.90E-08	7.00E-01	8.90E-09	0.00%	0.00%
Nickel	0.00E+00	mg/L	8.12E+00	mg/kg	7.04E+00	mg/kg	#######		4.86E-01	1.06E+00	6.43E-02	6.67E-02	6.43E-02	8.71E-02	8.71E-02	0.00E+00	5.60E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.72E-02	3.44E-03	1.72E-02	0.00E+00	0.00E+00	9.39E-02	4.00E+01	2.35E-03	8.00E+01	1.17E-03	0.01%	0.03%
Nitrate	4.79E-01	mg/L	9.50E-02	mg/kg	6.12E-01	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	4.65E-02	6.55E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.58E-04	9.43E-04	6.58E-04	0.00E+00	0.00E+00	4.94E-02	5.07E+02	9.75E-05	1.13E+03	4.37E-05	0.00%	0.00%
Nitrate/Nitrite	5.55E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	3.01E+02								5.39E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.39E-03	5.07E+02	1.06E-05	1.13E+03	4.77E-06	0.00%	0.00%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	3.21E-03	mg/kg	#######			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.88E-06	0.00E+00	0.00E+00	0.00E+00	3.88E-06	2.10E+00	1.85E-06	6.30E+00	6.17E-07	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	2.24E-04	mg/kg	#######			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.51E-08	0.00E+00	0.00E+00	0.00E+00	4.51E-08	2.40E-01	1.88E-07	2.40E+00	1.88E-08	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	9.65E-02	mg/kg	#######			3.00E-01	NA	2.91E+01	2.91E+01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	2.06E-02	0.00E+00	0.00E+00	0.00E+00	2.06E-02	8.50E+00	2.42E-03	2.55E+01	8.08E-04	0.01%	0.02%
Selenium	0.00E+00	mg/L	7.51E-01	mg/kg	5.98E-01	mg/kg	#######	2.05E+02	4.50E+00	1.07E+00	4.92E-01	4.81E-01	4.92E-01	1.51E-01	1.51E-01	0.00E+00	5.18E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.22E-02	2.11E-03	1.22E-02	0.00E+00	0.00E+00	3.17E-02	2.00E-01	1.58E-01	3.30E-01	9.60E-02	0.48%	2.19%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.45E+01	mg/kg	#######		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.77E-02	0.00E+00	0.00E+00	0.00E+00	3.77E-02	2.63E+02	1.43E-04	7.89E+02	4.78E-05	0.00%	0.00%
Sulfate	5.14E+00	mg/L	1.39E+01	mg/kg	4.14E+01	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	4.99E-01	9.57E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.62E-02	6.38E-02	9.62E-02	0.00E+00	0.00E+00	8.51E-01	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	6.14E-01	mg/kg	0.00E+00	mg/kg	#######	7.50E+01	4.50E+00							0.00E+00	4.23E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.23E-03	7.40E-03	5.72E-01	7.40E-02	5.72E-02	1.74%	1.31%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Vanadium	2.64E-02	mg/L	0.00E+00	mg/kg	1.89E+01	mg/kg	#######	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	2.56E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.99E-04	0.00E+00	0.00E+00	0.00E+00	3.06E-03	2.10E-01	1.46E-02	2.10E+00	1.46E-03	0.04%	0.03%
Zinc	0.00E+00	mg/L	3.22E+01	mg/kg	4.92E+01	mg/kg	#######	2.91E+03	1.94E+00	6.23E+00	1.05E+00	8.74E-01	1.05E+00	1.84E-01	1.84E-01	0.00E+00	2.22E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.12E+00	3.16E-01	1.12E+00	0.00E+00	0.00E+00	2.78E+00	1.60E+02	1.74E-02	3.20E+02	8.68E-03	0.05%	0.20%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	1.6E+00	1.0E+00	4.82%	22.89%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	3.5E-09	1.8E-09	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	2.0E-06	4.0E-07	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	3.8E-06	3.8E-07	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	6.9E-07	6.9E-08	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\,x\,Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text tables.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0.1	unitless
Aquatic plant diet fraction =	0.45	unitless
Plant root diet fraction =	0.45	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0.008093	kg/d
Food ingestion rate =	0.0861	kg/d
Body weight =	1.174	kg
Home range =	0.33112	acres
Water intake rate =	0.114	L/d
Site Area =	262	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-169
Tier 1 COPCs
EEQs and Hazard Indices for the River Otter at LHAAP
Waste Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							Unitless	Unitless	Unitless	Unitless	Unitless	Unitless	Unitless	Unitless	Unitless	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	8.46E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.32E-03	8.32E-03	2.68E+00	3.11E-03	1.33E+01	6.25E-04	0.01%	0.01%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-01	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.34E-04	2.34E-04	1.13E-01	2.07E-03	2.64E-01	8.86E-04	0.00%	0.01%
2,3,7,8-TCDD TEQ	1.22E-08	mg/L	8.87E-06	mg/kg	7.33E-05	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	3.55E-10	1.97E-09	0.00E+00	3.19E-05	1.66E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.81E-09	3.20E-05	1.00E-06	3.20E+01	1.00E-05	3.20E+00	54.54%	43.35%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	4.91E+02	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.83E-01	4.83E-01	2.00E-01	2.41E+00	3.00E-01	1.61E+00	4.11%	21.78%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	1.23E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.21E-03	1.21E-03	2.00E-01	6.04E-03	1.50E+00	8.06E-04	0.01%	0.01%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	2.40E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.36E-03	2.36E-03	2.00E-01	1.18E-02	6.00E-01	3.94E-03	0.02%	0.05%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	6.15E-04	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.05E-07	6.05E-07	8.00E-01	7.56E-07	4.00E+00	1.51E-07	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	2.06E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.75E-06	1.75E-06	8.00E-01	2.18E-06	4.00E+00	4.37E-07	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.85E-04	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.05E-07	4.05E-07	8.00E-01	5.06E-07	4.00E+00	1.01E-07	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.90E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.85E-07	2.85E-07	4.58E+00	6.22E-08	9.16E+00	3.11E-08	0.00%	0.00%
Aluminum	6.11E+00	mg/L	9.69E+03	mg/kg	9.02E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	1.78E-01	2.15E+00	0.00E+00	4.04E-01	3.72E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.67E-02	4.00E+01	1.93E+00	2.07E+01	1.93E+01	2.07E+00	35.31%	28.07%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.57E+00	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.64E-04	3.64E-04	1.25E-01	2.91E-03	1.25E+00	2.91E-04	0.00%	0.00%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.34E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.29E-06	3.29E-06	6.85E-02	4.80E-05	6.85E-01	4.80E-06	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.90E-01	0.00E+00	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	5.97E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.41E-06	5.41E-06	6.80E-02	7.96E-05	6.90E-01	7.84E-06	0.00%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	2.66E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.35E-06	4.35E-06	6.80E-02	6.40E-05	6.90E-01	6.31E-06	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.90E-01	0.00E+00	0.00%	0.00%
Barium	0.00E+00	mg/L	1.32E+02	mg/kg	1.01E+03	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	2.94E-02	0.00E+00	0.00E+00	5.08E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.86E-02	5.66E-01	5.10E+00	1.11E-01	1.98E+01	2.86E-02	0.19%	0.39%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	2.49E-03	mg/L	5.48E-01	mg/kg	5.20E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.25E+01	8.11E-01	8.31E-01	8.31E-01	9.22E-01	9.22E-01	7.24E-05	1.22E-04	0.00E+00	6.23E-02	3.74E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.09E-04	6.66E-02	1.00E+00	6.66E-02	1.00E+01	6.66E-03	0.11%	0.09%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.61E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.57E-03	4.57E-03	3.28E+00	1.39E-03	1.31E+01	3.48E-04	0.00%	0.00%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Copper	1.18E-02	mg/L	7.20E+00	mg/kg	1.37E+01	mg/kg	1.00E+00	5.92E+03	5.25E+00	8.28E-01	5.86E-01	3.96E-01	3.96E-01	1.49E-01	1.49E-01	3.44E-04	1.60E-03	0.00E+00	1.07E+00	3.23E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.75E-03	1.11E+00	1.17E+01	9.48E-02	1.51E+01	7.33E-02	0.16%	0.99%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-02	0.00E+00	2.00E-01	0.00E+00	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	4.39E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.55E-07	4.55E-07	9.20E-02	4.95E-06	9.20E-01	4.95E-07	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.10E-01	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.06E-04	2.06E-04	8.00E-02	2.58E-03	2.90E-01	7.11E-04	0.00%	0.01%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.40E-03	1.40E-03	1.00E+00	1.40E-03	5.00E+00	2.80E-04	0.00%	0.00%
Iron	5.98E+00	mg/L	0.00E+00	mg/kg	1.28E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	1.74E-01	0.00E+00	0.00E+00	9.18E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.26E-02	9.20E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	1.35E-05	0.00E+00	0.00E+00	1.14E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E-03	NA	NA	NA	NA	NA	NA
Lead	5.18E-03	mg/L	0.00E+00	mg/kg	7.44E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	3.57E-01	NA	3.97E-02	3.97E-02	1.33E-02	1.33E-02	1.51E-04	0.00E+00	0.00E+00	1.19E-01	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	8.45E-04	1.20E-01	8.00E+00	1.50E-02	8.00E+01	1.50E-03	0.03%	0.02%
Manganese	4.54E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+03	2.10E+00	NA	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	1.32E-02	0.00E+00	0.00E+00	1.40E+01	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.40E+01	8.80E+01	1.59E-01	2.84E+02	4.92E-02	0.27%	0.67%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E-01	mg/kg	1.00E+00		2.87E+00	4.75E+00	NA	1.02E+00	1.02E+00	1.03E-01	1.03E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	9.65E-06	9.65E-06	1.00E+00	9.65E-06	3.00E+00	3.22E-06	0.00%	0.00%
Mercury (methyl)	0.00E+00	mg/L	9.58E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.08E+00	NA	NA			0.00E+00	2.13E-05	0.00E+00	0.00E+00	2.34E-04	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	2.56E-04	1.50E-02	1.70E-02	2.50E-02	1.02E-02	0.03%	0.14%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.52E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.46E-07	3.46E-07	7.00E-02	4.94E-06	7.00E-01	4.94E-07	0.00%	0.00%
Nickel	0.00E+00	mg/L	9.33E+00	mg/kg	7.49E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	6.21E-02	6.57E-02	6.57E-02	1.01E-01	1.01E-01	0.00E+00	2.07E-03	0.00E+00	0.00E+00	1.85E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.46E-04	2.12E-02	4.00E+01	5.30E-04	8.00E+01	2.65E-04	0.00%	0.00%
Nitrate	8.67E-01	mg/L	1.30E-01	mg/kg	1.08E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	2.52E-02	2.88E-05	0.00E+00	1.42E+01	2.32E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.53E-04	1.43E+01	5.07E+02	2.81E-02	1.13E+03	1.26E-02	0.05%	0.17%
Nitrate/Nitrite	7.06E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03								2.06E-03	0.00E+00	0.00E+00	1.16E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.16E+00	5.07E+02	2.29E-03	1.13E+03	1.03E-03	0.00%	0.01%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	3.51E-03	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.45E-06	3.45E-06	2.10E+00	1.64E-06	6.30E+00	5.48E-07	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	2.98E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.93E-07	2.93E-07	2.40E-01	1.22E-06	2.40E+00	1.22E-07	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	1.32E-01	mg/kg	1.00E+00			1.14E+00	NA	2.56E+01	2.56E+01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	1.87E-05	1.87E-05	8.50E+00	2.20E-06	2.55E+01	7.35E-07	0.00%	0.00%
Selenium	0.00E+00	mg/L	8.67E-01	mg/kg	6.76E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.03E+00	4.99E-01	4.87E-01	4.87E-01	1.95E-01	1.95E-01	0.00E+00	1.92E-04	0.00E+00	0.00E+00	3.33E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.12E-04	3.63E-03	2.00E-01	1.82E-02	3.30E-01	1.10E-02	0.03%	0.15%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	3.28E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.65E-03	4.65E-03	2.63E+02	1.77E-05	7.89E+02	5.89E-06	0.00%	0.00%
Sulfate	6.09E+00	mg/L	2.00E+01	mg/kg	1.04E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	1.77E-01	4.43E-03	0.00E+00	9.99E+01	3.58E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.47E-02	1.00E+02	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	7.12E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00							0.00E+00	1.58E-04	0.00E+00	0.00E+00	2.73E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.89E-03	7.40E-03	3.91E-01	7.40E-02	3.91E-02	0.67%	0.53%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Vanadium	3.33E-02	mg/L	0.00E+00	mg/kg	2.15E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	9.70E-04	0.00E+00	0.00E+00	5.46E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.08E-04	5.48E-01	2.10E-01	2.61E+00	2.10E+00	2.61E-01	4.44%	3.53%
Zinc	0.00E+00	mg/L	3.82E+01	mg/kg	6.24E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.31E+00	9.78E-01	7.87E-01	7.87E-01	4.51E-01	4.51E-01	0.00E+00	8.47E-03	0.00E+00	0.00E+00	2.45E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-02	2.78E-01	1.60E+02	1.74E-03	3.20E+02	8.68E-04	0.00%	0.01%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	2.4E+00	1.6E+00	4.14%	21.85%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	6.2E-08	3.1E-08	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	3.4E-06	6.9E-07	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.9E-04	1.9E-05	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	5.0E-06	5.0E-07	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi x Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.9	unitless
Aq. Invert diet fraction =	0.05	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0.05	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0.00494	kg/d
Food ingestion rate =	0.38	kg/d
Body weight =	8	kg
Home range =	729	acres
Water intake rate =	0.648	L/d
Site Area =	262	acres
Area Use Factor (AUF) =	0.359396	unitless
Exposure Duration (ED) =	1	unitless

Table E-170
Tier 2 COPCs
EEQs and Hazard Indices for the River Otter at LHAAP
Waste Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
							-----	-----	-----	-----	-----Unitless-----	-----	-----	-----	-----
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	5.16E+00	mg/kg	#######			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.49E-01	mg/kg	#######			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01
2,3,7,8-TCDD TEQ	1.07E-08	mg/L	5.59E-06	mg/kg	3.16E-05	mg/kg	#######	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	2.47E+02	mg/kg	#######			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	5.56E-01	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	1.24E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	4.55E-04	mg/kg	#######		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.48E-03	mg/kg	#######		4.75E+00	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.98E-04	mg/kg	#######		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.37E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Aluminum	4.16E+00	mg/L	8.09E+03	mg/kg	6.95E+03	mg/kg	#######	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.06E+00	mg/kg	#######			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.22E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.21E-03	mg/kg	#######		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.94E-03	mg/kg	#######			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	5.33E+02	mg/kg	#######	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01
Cadmium	2.09E-03	mg/L	4.57E-01	mg/kg	4.73E-01	mg/kg	#######	1.15E+03	6.00E-01	2.35E+01	8.80E-01	8.67E-01	8.67E-01	6.72E-01	6.72E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.46E+01	mg/kg	#######	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Copper	9.31E-03	mg/L	6.17E+00	mg/kg	1.09E+01	mg/kg	#######	1.11E+03	1.56E+00	9.82E-01	6.44E-01	4.54E-01	4.54E-01	8.97E-02	8.97E-02
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.17E-04	mg/kg	#######			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.52E-01	mg/kg	#######			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	1.03E+00	mg/kg	#######			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01
Iron	4.18E+00	mg/L	0.00E+00	mg/kg	1.12E+04	mg/kg	#######	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	#######		4.67E+00		1.39E+01	1.39E+01	1.39E+01		
Lead	4.09E-03	mg/L	0.00E+00	mg/kg	4.77E+01	mg/kg	#######	4.48E+02	7.10E-02	3.89E-01	NA	4.83E-02	4.83E-02	1.16E-02	1.16E-02
Manganese	3.17E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	2.50E+02	4.20E-01	NA	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	9.02E-02	mg/kg	#######		1.14E+00	5.42E+00	NA	1.11E+00	1.11E+00	9.15E-02	9.15E-02
Mercury (methyl)	0.00E+00	mg/L	8.35E-02	mg/kg	0.00E+00	mg/kg	#######		1.14E+00	NA	1.15E+00	NA	NA		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.47E-04	mg/kg	#######			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01
Nickel	0.00E+00	mg/L	8.12E+00	mg/kg	7.04E+00	mg/kg	#######		4.86E-01	1.06E+00	6.43E-02	6.67E-02	6.67E-02	8.71E-02	8.71E-02
Nitrate	4.79E-01	mg/L	9.50E-02	mg/kg	6.12E-01	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Nitrate/Nitrite	5.55E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	3.01E+02							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	3.21E-03	mg/kg	#######			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	2.24E-04	mg/kg	#######			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	9.65E-02	mg/kg	#######			3.00E-01	NA	2.91E+01	2.91E+01	1.11E-01	1.11E-01
Selenium	0.00E+00	mg/L	7.51E-01	mg/kg	5.98E-01	mg/kg	#######	2.05E+02	4.50E+00	1.07E+00	4.92E-01	4.81E-01	4.81E-01	1.51E-01	1.51E-01
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.50E+00		1.40E-02	1.40E-02	1.40E-02		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.45E+01	mg/kg	#######		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Sulfate	5.14E+00	mg/L	1.39E+01	mg/kg	4.14E+01	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Thallium	0.00E+00	mg/L	6.14E-01	mg/kg	0.00E+00	mg/kg	#######	7.50E+01	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Vanadium	2.64E-02	mg/L	0.00E+00	mg/kg	1.89E+01	mg/kg	#######	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03
Zinc	0.00E+00	mg/L	3.22E+01	mg/kg	4.92E+01	mg/kg	#######	2.91E+03	1.94E+00	6.23E+00	1.05E+00	8.74E-01	8.74E-01	1.84E-01	1.84E-01

Chemical	EED Surface Water (mg/kg-d)	EED Sediment (mg/kg-d)	EED Soil (mg/kg-d)	EED Fish (mg/kg-d)	EED Aq. Invert. (mg/kg-d)	EED Terr. Invert. (mg/kg-d)	EED Aq. Plants (mg/kg-d)	EED Terr. Plants (mg/kg-d)	EED Plant Roots (mg/kg-d)	EED Mammals (mg/kg-d)	EED Birds (mg/kg-d)	Total EED (mg/kg-d)	NOAEL (mg/kg-d)	EEQ N	LOAEL (mg/kg-d)	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.85E-03	2.85E-03	2.68E+00	1.06E-03	1.33E+01	2.14E-04	0.01%	0.01%
1,3-Dinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.24E-05	8.24E-05	1.13E-01	7.29E-04	2.64E-01	3.12E-04	0.00%	0.01%
2,3,7,8-TCDD TEQ	2.29E-10	9.15E-10	0.00E+00	2.79E-06	1.64E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.42E-10	2.81E-06	1.00E-06	2.81E+00	1.00E-05	2.81E-01	16.48%	13.23%
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E-01	1.36E-01	2.00E-01	6.82E-01	3.00E-01	4.55E-01	4.00%	21.41%
2,4-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.07E-04	3.07E-04	2.00E-01	1.53E-03	1.50E+00	2.05E-04	0.01%	0.01%
2,6-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.87E-04	6.87E-04	2.00E-01	3.43E-03	6.00E-01	1.14E-03	0.02%	0.05%
4,4'-DDD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.51E-07	2.51E-07	8.00E-01	3.14E-07	4.00E+00	6.28E-08	0.00%	0.00%
4,4'-DDE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.76E-07	8.76E-07	8.00E-01	1.09E-06	4.00E+00	2.19E-07	0.00%	0.00%
4,4'-DDT	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E-07	1.11E-07	8.00E-01	1.39E-07	4.00E+00	2.77E-08	0.00%	0.00%
Aldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
alpha-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.31E-07	1.31E-07	4.58E+00	2.85E-08	9.16E+00	1.43E-08	0.00%	0.00%
Aluminum	8.93E-02	1.32E+00	0.00E+00	2.03E-01	2.29E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.90E-02	2.46E+01	1.93E+00	1.27E+01	1.93E+01	1.27E+00	74.64%	59.94%
Antimony	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.44E-04	1.44E-04	1.25E-01	1.15E-03	1.25E+00	1.15E-04	0.01%	0.01%
Aroclor 1242	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.23E-06	1.23E-06	6.85E-02	1.79E-05	6.85E-01	1.79E-06	0.00%	0.00%
Aroclor 1248	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.90E-01	0.00E+00	0.00%	0.00%
Aroclor 1254	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.32E-06	1.32E-06	6.80E-02	1.94E-05	6.90E-01	1.91E-06	0.00%	0.00%
Aroclor 1260	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.04E-06	2.04E-06	6.80E-02	3.00E-05	6.90E-01	2.96E-06	0.00%	0.00%
Aroclor 1268	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.90E-01	0.00E+00	0.00%	0.00%
Barium	0.00E+00	1.93E-02	0.00E+00	0.00E+00	3.35E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.72E-03	3.61E-01	5.10E+00	7.07E-02	1.98E+01	1.82E-02	0.41%	0.86%
Benzoic Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	4.48E-05	7.49E-05	0.00E+00	2.71E-02	1.73E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-04	2.76E-02	1.00E+00	2.76E-02	1.00E+01	2.76E-03	0.16%	0.13%
Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Chromium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.79E-04	7.79E-04	3.28E+00	2.38E-04	1.31E+01	5.93E-05	0.00%	0.00%
cis-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Copper	2.00E-04	1.01E-03	0.00E+00	1.17E-01	6.06E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.18E-04	1.25E-01	1.17E+01	1.07E-02	1.51E+01	8.27E-03	0.06%	0.39%
Dieldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-02	0.00E+00	2.00E-01	0.00E+00	0.00%	0.00%
Endrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.42E-07	2.42E-07	9.20E-02	2.63E-06	9.20E-01	2.63E-07	0.00%	0.00%
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.40E-05	8.40E-05	8.00E-02	1.05E-03	2.90E-01	2.90E-04	0.01%	0.01%
HMX	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.70E-04	5.70E-04	1.00E+00	5.70E-04	5.00E+00	1.14E-04	0.00%	0.01%
Iron	8.97E-02	0.00E+00	0.00E+00	1.18E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.24E-02	1.19E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	9.99E-06	0.00E+00	0.00E+00	1.79E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.89E-04	NA	NA	NA	NA	NA	NA
Lead	8.79E-05	0.00E+00	0.00E+00	2.08E-02	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	3.50E-04	2.12E-02	8.00E+00	2.65E-03	8.00E+01	2.65E-04	0.02%	0.01%
Manganese	6.80E-03	0.00E+00	0.00E+00	8.97E-01	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.04E-01	8.80E+01	1.03E-02	2.84E+02	3.18E-03	0.06%	0.15%
Mercury (inorganic)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	5.19E-06	5.19E-06	1.00E+00	5.19E-06	3.00E+00	1.73E-06	0.00%	0.00%
Mercury (methyl)	0.00E+00	1.37E-05	0.00E+00	0.00E+00	5.97E-05	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	7.34E-05	1.50E-02	4.89E-03	2.50E-02	2.94E-03	0.03%	0.14%
Mirex	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E-07	1.36E-07	7.00E-02	1.95E-06	7.00E-01	1.95E-07	0.00%	0.00%
Nickel	0.00E+00	1.33E-03	0.00E+00	0.00E+00	2.49E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.86E-04	4.20E-03	4.00E+01	1.05E-04	8.00E+01	5.25E-05	0.00%	0.00%
Nitrate	1.03E-02	1.56E-05	0.00E+00	1.63E+00	2.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.27E-05	1.64E+00	5.07E+02	3.24E-03	1.13E+03	1.45E-03	0.02%	0.07%
Nitrate/Nitrite	1.19E-03	0.00E+00	0.00E+00	1.89E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E-01	5.07E+02	3.76E-04	1.13E+03	1.69E-04	0.00%	0.01%
Oxychlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.77E-06	1.77E-06	2.10E+00	8.42E-07	6.30E+00	2.81E-07	0.00%	0.00%
Pentachloroanisole	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.24E-07	1.24E-07	2.40E-01	5.16E-07	2.40E+00	5.16E-08	0.00%	0.00%
Pentachlorophenol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	6.73E-06	6.73E-06	8.50E+00	7.92E-07	2.55E+01	2.64E-07	0.00%	0.00%
Selenium	0.00E+00	1.23E-04	0.00E+00	0.00E+00	2.13E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.69E-05	2.31E-03	2.00E-01	1.15E-02	3.30E-01	6.99E-03	0.07%	0.33%
Silver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.71E-03	1.71E-03	2.63E+02	6.50E-06	7.89E+02	2.17E-06	0.00%	0.00%
Sulfate	1.10E-01	2.27E-03	0.00E+00	1.75E+01	3.67E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.89E-03	1.76E+01	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	1.01E-04	0.00E+00	0.00E+00	1.74E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.84E-03	7.40E-03	2.49E-01	7.40E-02	2.49E-02	1.46%	1.17%
trans-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Vanadium	5.67E-04	0.00E+00	0.00E+00	9.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.54E-05	9.06E-02	2.10E-01	4.32E-01	2.10E+00	4.32E-02	2.53%	2.03%
Zinc	0.00E+00	5.27E-03	0.00E+00	0.00E+00	3.93E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.71E-03	5.02E-02	1.60E+02	3.14E-04	3.20E+02	1.57E-04	0.00%	0.01%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	6.9E-01	4.6E-01	4.03%	21.48%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	2.9E-08	1.4E-08	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	1.5E-06	3.1E-07	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	6.7E-05	6.7E-06	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	2.6E-06	2.6E-07	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\,x\,Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.9	unitless
Aq. Invert diet fraction =	0.05	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0.05	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0.00494	kg/d
Food ingestion rate =	0.38	kg/d
Body weight =	8	kg
Home range =	988	acres
Water intake rate =	0.648	L/d
Site Area =	262	acres
Area Use Factor (AUF) =	0.265182	unitless
Exposure Duration (ED) =	1	unitless

Table E-171
Tier 1 COPCs
EEQs and Hazard Indices for the Townsend's Big-Eared Bat at LHAAP
Waste Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							---Unitless---									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	EEQ N	mg/kg-d	EEQ L	EEQ N	EEQ L
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	8.46E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	2.68E+00	7.85E-01	1.33E+01	1.58E-01	2.59%	0.95%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-01	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.52E-02	0.00E+00	0.00E+00	0.00E+00	3.52E-02	1.13E-01	3.12E-01	2.64E-01	1.33E-01	1.03%	0.80%
2,3,7,8-TCDD TEQ	1.22E-08	mg/L	8.87E-06	mg/kg	7.33E-05	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	7.15E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.25E-09	0.00E+00	0.00E+00	0.00E+00	9.97E-09	1.00E-06	9.97E-03	1.00E-05	9.97E-04	0.03%	0.01%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	4.91E+02	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.36E+00	0.00E+00	0.00E+00	0.00E+00	4.36E+00	2.00E-01	2.18E+01	3.00E-01	1.45E+01	72.01%	87.33%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	1.23E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.48E-02	0.00E+00	0.00E+00	0.00E+00	9.48E-02	2.00E-01	4.74E-01	1.50E+00	6.32E-02	1.56%	0.38%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	2.40E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.58E-01	0.00E+00	0.00E+00	0.00E+00	1.58E-01	2.00E-01	7.90E-01	6.00E-01	2.63E-01	2.61%	1.58%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	6.15E-04	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.37E-06	0.00E+00	0.00E+00	0.00E+00	1.37E-06	8.00E-01	1.71E-06	4.00E+00	3.42E-07	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	2.06E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-05	0.00E+00	0.00E+00	0.00E+00	3.54E-05	8.00E-01	4.43E-05	4.00E+00	8.86E-06	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.85E-04	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.34E-07	0.00E+00	0.00E+00	0.00E+00	6.34E-07	8.00E-01	7.92E-07	4.00E+00	1.58E-07	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.90E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.24E-07	0.00E+00	0.00E+00	0.00E+00	3.24E-07	4.58E+00	7.08E-08	9.16E+00	3.54E-08	0.00%	0.00%
Aluminum	6.11E+00	mg/L	9.69E+03	mg/kg	9.02E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	3.58E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.76E-01	0.00E+00	0.00E+00	0.00E+00	9.34E-01	1.93E+00	4.84E-01	1.93E+01	4.84E-02	1.60%	0.29%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.57E+00	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.99E-03	0.00E+00	0.00E+00	0.00E+00	4.99E-03	1.25E-01	3.99E-02	1.25E+00	3.99E-03	0.13%	0.02%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.34E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.51E-05	0.00E+00	0.00E+00	0.00E+00	1.51E-05	6.85E-02	2.21E-04	6.85E-01	2.21E-05	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.80E-01	0.00E+00	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	5.97E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.47E-06	0.00E+00	0.00E+00	0.00E+00	1.47E-06	6.80E-02	2.16E-05	6.80E-01	2.16E-06	0.00%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	2.66E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.35E-07	0.00E+00	0.00E+00	0.00E+00	3.35E-07	6.80E-02	4.93E-06	6.80E-01	4.93E-07	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.80E-01	0.00E+00	0.00%	0.00%
Barium	0.00E+00	mg/L	1.32E+02	mg/kg	1.01E+03	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.58E+01	0.00E+00	0.00E+00	0.00E+00	2.58E+01	5.10E+00	5.06E+00	1.98E+01	1.30E+00	16.71%	7.83%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	2.49E-03	mg/L	5.48E-01	mg/kg	5.20E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.25E+01	8.11E-01	8.31E-01	8.31E-01	9.22E-01	9.22E-01	1.46E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E-02	0.00E+00	0.00E+00	0.00E+00	1.21E-02	1.00E+00	1.21E-02	1.00E+01	1.21E-03	0.04%	0.01%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.61E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E-01	0.00E+00	0.00E+00	0.00E+00	2.14E-01	3.28E+00	6.53E-02	1.31E+01	1.63E-02	0.22%	0.10%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Copper	1.18E-02	mg/L	7.20E+00	mg/kg	1.37E+01	mg/kg	1.00E+00	5.92E+03	5.25E+00	8.28E-01	5.86E-01	3.96E-01	3.96E-01	1.49E-01	1.49E-01	6.92E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.51E-01	0.00E+00	0.00E+00	0.00E+00	1.51E-01	1.17E+01	1.29E-02	1.51E+01	9.99E-03	0.04%	0.06%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-02	0.00E+00	2.00E-01	0.00E+00	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	4.39E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.65E-07	0.00E+00	0.00E+00	0.00E+00	4.65E-07	9.20E-02	5.06E-06	9.20E-01	5.06E-07	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.10E-01	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E-04	0.00E+00	0.00E+00	0.00E+00	1.10E-04	8.00E-02	1.37E-03	2.90E-01	3.79E-04	0.00%	0.00%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.32E-01	0.00E+00	0.00E+00	0.00E+00	3.32E-01	1.00E+00	3.32E-01	5.00E+00	6.63E-02	1.10%	0.40%
Iron	5.98E+00	mg/L	0.00E+00	mg/kg	1.28E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	3.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E+00	0.00E+00	0.00E+00	0.00E+00	1.77E+00	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	5.18E-03	mg/L	0.00E+00	mg/kg	7.44E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	3.57E-01	NA	3.97E-02	3.97E-02	1.33E-02	1.33E-02	3.03E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	8.20E-02	0.00E+00	0.00E+00	0.00E+00	8.23E-02	8.00E+00	1.03E-02	8.00E+01	1.03E-03	0.03%	0.01%
Manganese	4.54E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+03	2.10E+00	NA	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	2.66E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.66E-02	8.80E+01	3.02E-04	2.84E+02	9.37E-05	0.00%	0.00%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E-01	mg/kg	1.00E+00		2.87E+00	4.75E+00	NA	1.02E+00	1.02E+00	1.03E-01	1.03E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	3.10E-03	0.00E+00	0.00E+00	0.00E+00	3.10E-03	1.32E+01	2.35E-04	3.96E+01	7.82E-05	0.00%	0.00%
Mercury (methyl)	0.00E+00	mg/L	9.58E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.08E+00	NA	NA			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	3.20E-02	0.00E+00	1.60E-01	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.52E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.36E-07	0.00E+00	0.00E+00	0.00E+00	3.36E-07	7.00E-02	4.80E-06	7.00E-01	4.80E-07	0.00%	0.00%
Nickel	0.00E+00	mg/L	9.33E+00	mg/kg	7.49E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	6.21E-02	6.57E-02	6.57E-02	1.01E-01	1.01E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E-02	0.00E+00	0.00E+00	0.00E+00	1.36E-02	4.00E+01	3.41E-04	8.00E+01	1.71E-04	0.00%	0.00%
Nitrate	8.67E-01	mg/L	1.30E-01	mg/kg	1.08E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	5.08E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.04E-02	0.00E+00	0.00E+00	0.00E+00	6.13E-02	5.07E+02	1.21E-04	1.13E+03	5.42E-05	0.00%	0.00%
Nitrate/Nitrite	7.06E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03								4.14E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.14E-03	5.07E+02	8.16E-06	1.13E+03	3.66E-06	0.00%	0.00%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	3.51E-03	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.84E-05	0.00E+00	0.00E+00	0.00E+00	1.84E-05	2.10E+00	8.76E-06	6.30E+00	2.92E-06	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	2.98E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.77E-07	0.00E+00	0.00E+00	0.00E+00	2.77E-07	2.40E-01	1.15E-06	2.40E+00	1.15E-07	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	1.32E-01	mg/kg	1.00E+00			1.14E+00	NA	2.56E+01	2.56E+01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	9.38E-02	0.00E+00	0.00E+00	0.00E+00	9.38E-02	8.50E+00	1.10E-02	2.55E+01	3.68E-03	0.04%	0.02%
Selenium	0.00E+00	mg/L	8.67E-01	mg/kg	6.76E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.03E+00	4.99E-01	4.87E-01	4.87E-01	1.95E-01	1.95E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.14E-03	0.00E+00	0.00E+00	0.00E+00	9.14E-03	2.00E-01	4.57E-02	3.30E-01	2.77E-02	0.15%	0.17%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	3.28E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.19E-01	0.00E+00	0.00E+00	0.00E+00	3.19E-01	2.63E+02	1.21E-03	7.89E+02	4.04E-04	0.00%	0.00%
Sulfate	6.09E+00	mg/L	2.00E+01	mg/kg	1.04E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	3.57E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.01E+00	0.00E+00	0.00E+00	0.00E+00	1.37E+00	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	7.12E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.40E-03	0.00E+00	7.40E-02	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Vanadium	3.33E-02	mg/L	0.00E+00	mg/kg	2.15E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	1.95E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.38E-03	0.00E+00	0.00E+00	0.00E+00	4.33E-03	2.10E-01	2.06E-02	2.10E+00	2.06E-03	0.07%	0.01%
Zinc	0.00E+00	mg/L	3.82E+01	mg/kg	6.24E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.31E+00	9.78E-01	7.87E-01	7.87E-01	4.51E-01	4.51E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E+00	0.00E+00	0.00E+00	0.00E+00	1.36E+00	1.60E+02	8.53E-03	3.20E+02	4.27E-03	0.03%	0.03%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	2.3E+01	1.5E+01	76.18%	89.29%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	7.1E-08	3.5E-08	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	4.7E-05	9.4E-06	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	2.5E-04	2.5E-05	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	5.1E-06	5.1E-07	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	1	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.000711	kg/d
Body weight =	0.0095	kg
Home range =	1310	acres
Water intake rate =	0.0015	L/d
Site Area =	486	acres
Area Use Factor (AUF) =	0.370992	unitless
Exposure Duration (ED) =	1	unitless

Table E-172
Tier 2 COPCs
EEQs and Hazard Indices for the Townsend's Big-Eared Bat at LHAAP
Waste Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							-----	-----	-----	-----	-----Unitless-----	-----	-----	-----	-----	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	5.16E+00	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E-01	0.00E+00	0.00E+00	0.00E+00	2.68E-01	2.68E+00	1.00E-01	1.33E+01	2.02E-02	3.97%	1.45%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.49E-01	mg/kg	1.00E+00			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.11E-03	0.00E+00	0.00E+00	0.00E+00	6.11E-03	1.13E-01	5.41E-02	2.64E-01	2.32E-02	2.14%	1.67%
2,3,7,8-TCDD TEQ	1.07E-08	mg/L	5.59E-06	mg/kg	3.16E-05	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	2.08E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-09	0.00E+00	0.00E+00	0.00E+00	1.34E-09	1.00E-06	1.34E-03	1.00E-05	1.34E-04	0.05%	0.01%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	2.47E+02	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.65E-01	0.00E+00	0.00E+00	0.00E+00	3.65E-01	2.00E-01	1.82E+00	3.00E-01	1.22E+00	72.31%	87.64%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	5.56E-01	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E-02	0.00E+00	0.00E+00	0.00E+00	1.10E-02	2.00E-01	5.48E-02	1.50E+00	7.30E-03	2.17%	0.53%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	1.24E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.45E-02	0.00E+00	0.00E+00	0.00E+00	2.45E-02	2.00E-01	1.23E-01	6.00E-01	4.08E-02	4.85%	2.94%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	4.55E-04	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.18E-07	0.00E+00	0.00E+00	0.00E+00	1.18E-07	8.00E-01	1.48E-07	4.00E+00	2.95E-08	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.48E-03	mg/kg	1.00E+00		4.75E+00	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.86E-06	0.00E+00	0.00E+00	0.00E+00	1.86E-06	8.00E-01	2.32E-06	4.00E+00	4.65E-07	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.98E-04	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.14E-08	0.00E+00	0.00E+00	0.00E+00	5.14E-08	8.00E-01	6.43E-08	4.00E+00	1.29E-08	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.37E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.04E-08	0.00E+00	0.00E+00	0.00E+00	2.04E-08	4.58E+00	4.46E-09	9.16E+00	2.23E-09	0.00%	0.00%
Aluminum	4.16E+00	mg/L	8.09E+03	mg/kg	6.95E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	8.11E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.65E-02	0.00E+00	0.00E+00	0.00E+00	1.78E-01	1.93E+00	9.21E-02	1.93E+01	9.21E-03	3.65%	0.66%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.06E+00	mg/kg	1.00E+00			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.06E-04	0.00E+00	0.00E+00	0.00E+00	7.06E-04	1.25E-01	5.65E-03	1.25E+00	5.65E-04	0.22%	0.04%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.22E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.72E-07	0.00E+00	0.00E+00	0.00E+00	1.72E-07	6.85E-02	2.52E-06	6.85E-01	2.52E-07	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.80E-01	0.00E+00	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.21E-03	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.39E-07	0.00E+00	0.00E+00	0.00E+00	1.39E-07	6.80E-02	2.05E-06	6.80E-01	2.05E-07	0.00%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.94E-03	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E-08	0.00E+00	0.00E+00	0.00E+00	1.15E-08	6.80E-02	1.70E-07	6.80E-01	1.70E-08	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.80E-01	0.00E+00	0.00%	0.00%
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	5.33E+02	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.70E-01	0.00E+00	0.00E+00	0.00E+00	7.70E-01	5.10E+00	1.51E-01	1.98E+01	3.89E-02	5.98%	2.80%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	2.09E-03	mg/L	4.57E-01	mg/kg	4.73E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	2.35E+01	8.80E-01	8.67E-01	8.67E-01	6.72E-01	6.72E-01	4.07E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.79E-03	0.00E+00	0.00E+00	0.00E+00	3.83E-03	1.00E+00	3.83E-03	1.00E+01	3.83E-04	0.15%	0.03%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.46E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.55E-03	0.00E+00	0.00E+00	0.00E+00	5.55E-03	3.28E+00	1.69E-03	1.31E+01	4.22E-04	0.07%	0.03%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Copper	9.31E-03	mg/L	6.17E+00	mg/kg	1.09E+01	mg/kg	1.00E+00	1.11E+03	1.56E+00	9.82E-01	6.44E-01	4.54E-01	4.54E-01	8.97E-02	8.97E-02	1.82E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.60E-02	0.00E+00	0.00E+00	0.00E+00	4.62E-02	1.17E+01	3.94E-03	1.51E+01	3.05E-03	0.16%	0.22%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-02	0.00E+00	2.00E-01	0.00E+00	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.17E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.04E-08	0.00E+00	0.00E+00	0.00E+00	8.04E-08	9.20E-02	8.74E-07	9.20E-01	8.74E-08	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.52E-01	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.24E-05	0.00E+00	0.00E+00	0.00E+00	2.24E-05	8.00E-02	2.80E-04	2.90E-01	7.71E-05	0.01%	0.01%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	1.03E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.01E-02	0.00E+00	0.00E+00	0.00E+00	8.01E-02	1.00E+00	8.01E-02	5.00E+00	1.60E-02	3.17%	1.15%
Iron	4.18E+00	mg/L	0.00E+00	mg/kg	1.12E+04	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	8.15E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.14E-01	0.00E+00	0.00E+00	0.00E+00	4.96E-01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	4.09E-03	mg/L	0.00E+00	mg/kg	4.77E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	3.89E-01	NA	4.83E-02	4.83E-02	1.16E-02	1.16E-02	7.99E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	2.13E-02	0.00E+00	0.00E+00	0.00E+00	2.14E-02	8.00E+00	2.67E-03	8.00E+01	2.67E-04	0.11%	0.02%
Manganese	3.17E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.50E+02	4.20E-01	NA	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	6.18E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.18E-03	8.80E+01	7.03E-05	2.84E+02	2.18E-05	0.00%	0.00%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	9.02E-02	mg/kg	1.00E+00		1.14E+00	5.42E+00	NA	1.11E+00	1.11E+00	9.15E-02	9.15E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	9.29E-04	0.00E+00	0.00E+00	0.00E+00	9.29E-04	1.32E+01	7.03E-05	3.96E+01	2.34E-05	0.00%	0.00%
Mercury (methyl)	0.00E+00	mg/L	8.35E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	1.15E+00	NA	NA			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	3.20E-02	0.00E+00	1.60E-01	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.47E-04	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.86E-09	0.00E+00	0.00E+00	0.00E+00	7.86E-09	7.00E-02	1.12E-07	7.00E-01	1.12E-08	0.00%	0.00%
Nickel	0.00E+00	mg/L	8.12E+00	mg/kg	7.04E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	6.43E-02	6.67E-02	6.67E-02	8.71E-02	8.71E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.35E-03	0.00E+00	0.00E+00	0.00E+00	4.35E-03	4.00E+01	1.09E-04	8.00E+01	5.43E-05	0.00%	0.00%
Nitrate	4.79E-01	mg/L	9.50E-02	mg/kg	6.12E-01	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	9.35E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.19E-03	0.00E+00	0.00E+00	0.00E+00	1.05E-02	5.07E+02	2.08E-05	1.13E+03	9.33E-06	0.00%	0.00%
Nitrate/Nitrite	5.55E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02								1.08E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.08E-03	5.07E+02	2.14E-06	1.13E+03	9.59E-07	0.00%	0.00%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	3.21E-03	mg/kg	1.00E+00			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.90E-06	0.00E+00	0.00E+00	0.00E+00	4.90E-06	2.10E+00	2.33E-06	6.30E+00	7.78E-07	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	2.24E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.69E-08	0.00E+00	0.00E+00	0.00E+00	5.69E-08	2.40E-01	2.37E-07	2.40E+00	2.37E-08	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	9.65E-02	mg/kg	1.00E+00			3.00E-01	NA	2.91E+01	2.91E+01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	2.60E-02	0.00E+00	0.00E+00	0.00E+00	2.60E-02	8.50E+00	3.06E-03	2.55E+01	1.02E-03	0.12%	0.07%
Selenium	0.00E+00	mg/L	7.51E-01	mg/kg	5.98E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.07E+00	4.92E-01	4.81E-01	4.81E-01	1.51E-01	1.51E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.67E-03	0.00E+00	0.00E+00	0.00E+00	2.67E-03	2.00E-01	1.33E-02	3.30E-01	8.08E-03	0.53%	0.58%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.45E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.76E-02	0.00E+00	0.00E+00	0.00E+00	4.76E-02	2.63E+02	1.81E-04	7.89E+02	6.04E-05	0.01%	0.00%
Sulfate	5.14E+00	mg/L	1.39E+01	mg/kg	4.14E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	1.00E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.05E-02	0.00E+00	0.00E+00	0.00E+00	1.81E-01	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	6.14E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.40E-03	0.00E+00	7.40E-02	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Vanadium	2.64E-02	mg/L	0.00E+00	mg/kg	1.89E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	5.15E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.30E-04	0.00E+00	0.00E+00	0.00E+00	1.15E-03	2.10E-01	5.46E-03	2.10E+00	5.46E-04	0.22%	0.04%
Zinc	0.00E+00	mg/L	3.22E+01	mg/kg	4.92E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	6.23E+00	1.05E+00	8.74E-01	8.74E-01	1.84E-01	1.84E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.98E-01	0.00E+00	0.00E+00	0.00E+00	3.98E-01	1.60E+02	2.49E-03	3.20E+02	1.24E-03	0.10%	0.09%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	2.0E+00	1.3E+00	79.34%	91.11%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	4.5E-09	2.2E-09	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	2.5E-06	5.1E-07	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	4.7E-06	4.7E-07	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	8.7E-07	8.7E-08	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	1	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.000711	kg/d
Body weight =	0.0095	kg
Home range =	3930	acres
Water intake rate =	0.0015	L/d
Site Area =	486	acres
Area Use Factor (AUF) =	0.123664	unitless
Exposure Duration (ED) =	1	unitless

Table E-173
Tier 1 COPCs
EEQs and Hazard Indices for the Snapping Turtle at LHAAP
Waste Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF (Unitless)	Fish BAF (Unitless)	Aq. Invert. BAF (Unitless)	Terr. Invert. BAF (Unitless)	Aq. Plant BAF (Unitless)	Terr. Plant BAF (Unitless)	Plant Root BAF (Unitless)	Mammal BAF (Unitless)	Bird BAF (Unitless)
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	8.46E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-01	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00
2,3,7,8-TCDD TEQ	1.22E-08	mg/L	8.87E-06	mg/kg	7.33E-05	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	4.91E+02	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	1.23E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	2.40E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	6.15E-04	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	2.06E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.85E-04	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.90E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Aluminum	6.11E+00	mg/L	9.69E+03	mg/kg	9.02E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.57E+00	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.34E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	5.97E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	2.66E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00
Barium	0.00E+00	mg/L	1.32E+02	mg/kg	1.01E+03	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00
Cadmium	2.49E-03	mg/L	5.48E-01	mg/kg	5.20E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.25E+01	8.11E-01	8.31E-01	8.11E-01	9.22E-01	9.22E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.61E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Copper	1.18E-02	mg/L	7.20E+00	mg/kg	1.37E+01	mg/kg	1.00E+00	5.92E+03	5.25E+00	8.28E-01	5.86E-01	3.96E-01	5.86E-01	1.49E-01	1.49E-01
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	4.39E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.10E-01	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00
Iron	5.98E+00	mg/L	0.00E+00	mg/kg	1.28E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01		
Lead	5.18E-03	mg/L	0.00E+00	mg/kg	7.44E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	3.57E-01	NA	3.97E-02	NA	1.33E-02	1.33E-02
Manganese	4.54E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+03	2.10E+00	NA	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E-01	mg/kg	1.00E+00		2.87E+00	4.75E+00	NA	1.02E+00	NA	1.03E-01	1.03E-01
Mercury (methyl)	0.00E+00	mg/L	9.58E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.08E+00	NA	1.08E+00		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.52E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00
Nickel	0.00E+00	mg/L	9.33E+00	mg/kg	7.49E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	6.21E-02	6.57E-02	6.21E-02	1.01E-01	1.01E-01
Nitrate	8.67E-01	mg/L	1.30E-01	mg/kg	1.08E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Nitrate/Nitrite	7.06E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	3.51E-03	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	2.98E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	1.32E-01	mg/kg	1.00E+00			1.14E+00	NA	2.56E+01	2.56E+01	1.66E-01	1.66E-01
Selenium	0.00E+00	mg/L	8.67E-01	mg/kg	6.76E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.03E+00	4.99E-01	4.87E-01	4.99E-01	1.95E-01	1.95E-01
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	3.28E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Sulfate	6.09E+00	mg/L	2.00E+01	mg/kg	1.04E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Thallium	0.00E+00	mg/L	7.12E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Vanadium	3.33E-02	mg/L	0.00E+00	mg/kg	2.15E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03
Zinc	0.00E+00	mg/L	3.82E+01	mg/kg	6.24E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.31E+00	9.78E-01	7.87E-01	9.78E-01	4.51E-01	4.51E-01

Chemical	EED Surface Water (mg/kg-d)	EED Sediment (mg/kg-d)	EED Soil (mg/kg-d)	EED Fish (mg/kg-d)	EED Aq. Invert. (mg/kg-d)	EED Terr. Invert. (mg/kg-d)	EED Aq. Plants (mg/kg-d)	EED Terr. Plants (mg/kg-d)	EED Plant Roots (mg/kg-d)	EED Mammals (mg/kg-d)	EED Birds (mg/kg-d)	Total EED (mg/kg-d)	NOAEL (mg/kg-d)	EEQ N	LOAEL (mg/kg-d)	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDD TEQ	2.44E-10	1.41E-09	0.00E+00	3.63E-06	3.09E-08	0.00E+00	4.49E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.66E-06	NA	NA	NA	NA	NA	NA
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDT	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aluminum	1.22E-01	1.54E+00	0.00E+00	4.59E-02	6.93E+00	0.00E+00	2.48E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.66E+00	NA	NA	NA	NA	NA	NA
Antimony	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1248	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1254	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1260	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1268	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Barium	0.00E+00	2.10E-02	0.00E+00	0.00E+00	9.46E-02	0.00E+00	1.35E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.51E-01	NA	NA	NA	NA	NA	NA
Benzoic Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	4.97E-05	8.70E-05	0.00E+00	7.09E-03	6.96E-04	0.00E+00	4.94E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.41E-03	NA	NA	NA	NA	NA	NA
Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Chromium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
cis-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Copper	2.36E-04	1.14E-03	0.00E+00	1.22E-01	6.01E-03	0.00E+00	4.70E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.34E-01	NA	NA	NA	NA	NA	NA
Dieldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Endrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Iron	1.20E-01	0.00E+00	0.00E+00	1.04E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.06E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	9.68E-06	0.00E+00	0.00E+00	2.12E-04	0.00E+00	9.56E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.18E-03	NA	NA	NA	NA	NA	NA
Lead	1.04E-04	0.00E+00	0.00E+00	1.36E-02	0.00E+00	0.00E+00	NA	0.00E+00	NA	0.00E+00	0.00E+00	1.37E-02	NA	NA	NA	NA	NA	NA
Manganese	9.09E-03	0.00E+00	0.00E+00	1.59E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.60E+00	NA	NA	NA	NA	NA	NA
Mercury (inorganic)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Mercury (methyl)	0.00E+00	1.52E-05	0.00E+00	0.00E+00	4.37E-05	NA	1.15E-04	NA	0.00E+00	0.00E+00	0.00E+00	1.74E-04	NA	NA	NA	NA	NA	NA
Mirex	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	1.48E-03	0.00E+00	0.00E+00	3.44E-03	0.00E+00	6.45E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.57E-03	NA	NA	NA	NA	NA	NA
Nitrate	1.73E-02	2.06E-05	0.00E+00	1.62E+00	4.33E-05	0.00E+00	5.05E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.64E+00	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	1.41E-03	0.00E+00	0.00E+00	1.32E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E-01	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
p-Isopropyltoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Pentachloroanisole	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Pentachlorophenol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Perchlorate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Selenium	0.00E+00	1.38E-04	0.00E+00	0.00E+00	6.20E-04	0.00E+00	4.81E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.24E-03	NA	NA	NA	NA	NA	NA
Silver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Strontium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Sulfate	1.22E-01	3.17E-03	0.00E+00	1.14E+01	6.66E-03	0.00E+00	7.77E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E+01	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	1.13E-04	0.00E+00	0.00E+00	5.09E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.22E-04	NA	NA	NA	NA	NA	NA
trans-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Vanadium	6.66E-04	0.00E+00	0.00E+00	6.22E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.28E-02	NA	NA	NA	NA	NA	NA
Zinc	0.00E+00	6.06E-03	0.00E+00	0.00E+00	4.57E-02	0.00E+00	4.15E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.33E-02	NA	NA	NA	NA	NA	NA

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	0.0E+00	0.0E+00	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	0.0E+00	0.0E+00	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0.35	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.55	unitless
Aq. Invert diet fraction =	0.05	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0.000889	kg/d
Food ingestion rate =	0.0178	kg/d
Body weight =	5.6	kg
Home range =	0.593051	acres
Water intake rate =	0.112	L/d
Site Area =	262	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-174
Tier 2 COPCs
EEQs and Hazard Indices for the Snapping Turtle at LHAAP
Waste Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
									---------------Unitless	---------------	---------------	---------------	---------------	---------------	---------------	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	5.16E+00	mg/kg	#######			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.49E-01	mg/kg	#######			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDD TEQ	1.07E-08	mg/L	5.59E-06	mg/kg	3.16E-05	mg/kg	#######	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	2.13E-10	8.87E-10	0.00E+00	4.31E-07	4.15E-09	0.00E+00	2.41E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.36E-07	NA	NA	NA	NA	NA	NA
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	2.47E+02	mg/kg	#######			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	5.56E-01	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	1.24E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	4.55E-04	mg/kg	#######		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.48E-03	mg/kg	#######		4.75E+00	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.98E-04	mg/kg	#######		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.37E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aluminum	4.16E+00	mg/L	8.09E+03	mg/kg	6.95E+03	mg/kg	#######	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	8.31E-02	1.28E+00	0.00E+00	3.12E-02	5.79E+00	0.00E+00	1.35E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.20E+00	NA	NA	NA	NA	NA	NA
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.06E+00	mg/kg	#######			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.22E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.21E-03	mg/kg	#######		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.94E-03	mg/kg	#######			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	5.33E+02	mg/kg	#######	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	1.87E-02	0.00E+00	0.00E+00	8.44E-02	0.00E+00	2.05E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.24E-01	NA	NA	NA	NA	NA	NA
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	2.09E-03	mg/L	4.57E-01	mg/kg	4.73E-01	mg/kg	#######	1.15E+03	6.00E-01	2.35E+01	8.80E-01	8.67E-01	8.80E-01	6.72E-01	6.72E-01	4.17E-05	7.26E-05	0.00E+00	4.18E-03	4.36E-05	0.00E+00	4.48E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.79E-03	NA	NA	NA	NA	NA	NA
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.46E+01	mg/kg	#######	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Copper	9.31E-03	mg/L	6.17E+00	mg/kg	1.09E+01	mg/kg	#######	1.11E+03	1.56E+00	9.82E-01	6.44E-01	4.54E-01	6.44E-01	8.97E-02	8.97E-02	1.86E-04	9.79E-04	0.00E+00	1.81E-02	1.53E-03	0.00E+00	4.42E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.52E-02	NA	NA	NA	NA	NA	NA
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.17E-04	mg/kg	#######			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.52E-01	mg/kg	#######			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	1.03E+00	mg/kg	#######			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Iron	4.18E+00	mg/L	0.00E+00	mg/kg	1.12E+04	mg/kg	#######	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	8.35E-02	0.00E+00	0.00E+00	1.82E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.91E+00	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	#######		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	9.68E-06	0.00E+00	0.00E+00	4.53E-05	0.00E+00	9.43E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.98E-04	NA	NA	NA	NA	NA	NA
Lead	4.09E-03	mg/L	0.00E+00	mg/kg	4.77E+01	mg/kg	#######	4.48E+02	7.10E-02	3.89E-01	NA	4.83E-02	NA	1.16E-02	1.16E-02	8.18E-05	0.00E+00	0.00E+00	3.20E-03	0.00E+00	0.00E+00	NA	0.00E+00	NA	0.00E+00	0.00E+00	3.29E-03	NA	NA	NA	NA	NA	NA
Manganese	3.17E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	2.50E+02	4.20E-01	NA	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	6.33E-03	0.00E+00	0.00E+00	1.38E-01	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.45E-01	NA	NA	NA	NA	NA	NA
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	9.02E-02	mg/kg	#######		1.14E+00	5.42E+00	NA	1.11E+00	NA	9.15E-02	9.15E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Mercury (methyl)	0.00E+00	mg/L	8.35E-02	mg/kg	0.00E+00	mg/kg	#######		1.14E+00	NA	1.15E+00	NA	1.15E+00			0.00E+00	1.33E-05	0.00E+00	0.00E+00	1.51E-05	NA	1.07E-04	NA	0.00E+00	0.00E+00	0.00E+00	1.35E-04	NA	NA	NA	NA	NA	NA
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.47E-04	mg/kg	#######			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	mg/L	8.12E+00	mg/kg	7.04E+00	mg/kg	#######		4.86E-01	1.06E+00	6.43E-02	6.67E-02	6.43E-02	8.71E-02	8.71E-02	0.00E+00	1.29E-03	0.00E+00	0.00E+00	6.27E-04	0.00E+00	5.81E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-03	NA	NA	NA	NA	NA	NA
Nitrate	4.79E-01	mg/L	9.50E-02	mg/kg	6.12E-01	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	9.58E-03	1.51E-05	0.00E+00	2.52E-01	6.34E-06	0.00E+00	2.22E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.62E-01	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	5.55E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	3.01E+02								1.11E-03	0.00E+00	0.00E+00	2.92E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.03E-02	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	3.21E-03	mg/kg	#######			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	2.24E-04	mg/kg	#######			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	9.65E-02	mg/kg	#######			3.00E-01	NA	2.91E+01	2.91E+01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Selenium	0.00E+00	mg/L	7.51E-01	mg/kg	5.98E-01	mg/kg	#######	2.05E+02	4.50E+00	1.07E+00	4.92E-01	4.81E-01	4.92E-01	1.51E-01	1.51E-01	0.00E+00	1.19E-04	0.00E+00	0.00E+00	5.37E-04	0.00E+00	4.11E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E-03	NA	NA	NA	NA	NA	NA
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.45E+01	mg/kg	#######		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Sulfate	5.14E+00	mg/L	1.39E+01	mg/kg	4.14E+01	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	1.03E-01	2.20E-03	0.00E+00	2.70E+00	9.27E-04	0.00E+00	3.24E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.81E+00	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	6.14E-01	mg/kg	0.00E+00	mg/kg	#######	7.50E+01	4.50E+00							0.00E+00	9.74E-05	0.00E+00	0.00E+00	4.39E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.36E-04	NA	NA	NA	NA	NA	NA
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Vanadium	2.64E-02	mg/L	0.00E+00	mg/kg	1.89E+01	mg/kg	#######	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	5.28E-04	0.00E+00	0.00E+00	1.39E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.44E-02	NA	NA	NA	NA	NA	NA
Zinc	0.00E+00	mg/L	3.22E+01	mg/kg	4.92E+01	mg/kg	#######	2.91E+03	1.94E+00	6.23E+00	1.05E+00	8.74E-01	1.05E+00	1.84E-01	1.84E-01	0.00E+00	5.11E-03	0.00E+00	0.00E+00	9.91E-03	0.00E+00	3.77E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.28E-02	NA	NA	NA	NA	NA	NA

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	0.0E+00	0.0E+00	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	0.0E+00	0.0E+00	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi x Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0.35	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.55	unitless
Aq. Invert diet fraction =	0.05	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0.000889	kg/d
Food ingestion rate =	0.0178	kg/d
Body weight =	5.6	kg
Home range =	11.21854	acres
Water intake rate =	0.112	L/d
Site Area =	262	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-175
Tier 1 COPCs
EEQs and Hazard Indices for the Bank Swallow at LHAAP
Waste Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
							-----	-----	-----	-----	-----Unitless	-----	-----	-----	-----
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	8.46E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-01	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00
2,3,7,8-TCDD TEQ	1.22E-08	mg/L	8.87E-06	mg/kg	7.33E-05	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	4.91E+02	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	1.23E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	2.40E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	6.15E-04	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	2.06E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.85E-04	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.90E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Aluminum	6.11E+00	mg/L	9.69E+03	mg/kg	9.02E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.57E+00	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.34E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	5.97E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	2.66E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00
Barium	0.00E+00	mg/L	1.32E+02	mg/kg	1.01E+03	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00
Cadmium	2.49E-03	mg/L	5.48E-01	mg/kg	5.20E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.25E+01	8.11E-01	8.31E-01	8.31E-01	9.22E-01	9.22E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.61E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Copper	1.18E-02	mg/L	7.20E+00	mg/kg	1.37E+01	mg/kg	1.00E+00	5.92E+03	5.25E+00	8.28E-01	5.86E-01	3.96E-01	3.96E-01	1.49E-01	1.49E-01
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	4.39E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.10E-01	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00
Iron	5.98E+00	mg/L	0.00E+00	mg/kg	1.28E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01		
Lead	5.18E-03	mg/L	0.00E+00	mg/kg	7.44E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	3.57E-01	NA	3.97E-02	3.97E-02	1.33E-02	1.33E-02
Manganese	4.54E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+03	2.10E+00	NA	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E-01	mg/kg	1.00E+00		2.87E+00	4.75E+00	NA	1.02E+00	1.02E+00	1.03E-01	1.03E-01
Mercury (methyl)	0.00E+00	mg/L	9.58E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.08E+00	NA	NA		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.52E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00
Nickel	0.00E+00	mg/L	9.33E+00	mg/kg	7.49E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	6.21E-02	6.57E-02	6.57E-02	1.01E-01	1.01E-01
Nitrate	8.67E-01	mg/L	1.30E-01	mg/kg	1.08E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Nitrate/Nitrite	7.06E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	3.51E-03	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	2.98E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	1.32E-01	mg/kg	1.00E+00			1.14E+00	NA	2.56E+01	2.56E+01	1.66E-01	1.66E-01
Selenium	0.00E+00	mg/L	8.67E-01	mg/kg	6.76E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.03E+00	4.99E-01	4.87E-01	4.87E-01	1.95E-01	1.95E-01
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	3.28E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Sulfate	6.09E+00	mg/L	2.00E+01	mg/kg	1.04E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Thallium	0.00E+00	mg/L	7.12E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Vanadium	3.33E-02	mg/L	0.00E+00	mg/kg	2.15E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03
Zinc	0.00E+00	mg/L	3.82E+01	mg/kg	6.24E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.31E+00	9.78E-01	7.87E-01	7.87E-01	4.51E-01	4.51E-01

Chemical	EED Surface Water (mg/kg-d)	EED Sediment (mg/kg-d)	EED Soil (mg/kg-d)	EED Fish (mg/kg-d)	EED Aq. Invert. (mg/kg-d)	EED Terr. Invert. (mg/kg-d)	EED Aq. Plants (mg/kg-d)	EED Terr. Plants (mg/kg-d)	EED Plant Roots (mg/kg-d)	EED Mammals (mg/kg-d)	EED Birds (mg/kg-d)	Total EED (mg/kg-d)	NOAEL (mg/kg-d)	EEQ N	LOAEL (mg/kg-d)	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.22E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.22E-01	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.48E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.48E-02	4.22E-01	3.50E-02	1.27E+00	1.17E-02	0.01%	0.05%
2,3,7,8-TCDD TEQ	2.92E-09	2.09E-08	0.00E+00	0.00E+00	8.26E-06	7.70E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.60E-05	1.40E-05	1.14E+00	1.40E-04	1.14E-01	0.25%	0.47%
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.09E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.09E+01	7.00E-02	4.42E+02	1.80E+00	1.72E+01	94.94%	70.90%
2,4-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.80E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.80E-02	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.53E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.53E-01	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.51E-05	2.80E-03	1.61E-02	2.80E-02	1.61E-03	0.00%	0.01%
4,4'-DDE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E-04	5.80E-02	2.62E-03	5.80E-01	2.62E-04	0.00%	0.00%
4,4'-DDT	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.17E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.17E-05	2.80E-03	7.75E-03	2.80E-02	7.75E-04	0.00%	0.00%
Aldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.16E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.16E-05	2.14E+00	1.01E-05	1.07E+01	2.02E-06	0.00%	0.00%
Aluminum	1.46E+00	2.28E+01	0.00E+00	0.00E+00	1.86E+03	5.03E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.88E+03	1.10E+02	1.72E+01	3.29E+02	5.73E+00	3.69%	23.62%
Antimony	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.38E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.38E-02	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-04	4.10E-01	6.09E-04	1.23E+00	2.03E-04	0.00%	0.00%
Aroclor 1248	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Aroclor 1254	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E-04	1.80E-01	2.54E-03	1.80E+00	2.54E-04	0.00%	0.00%
Aroclor 1260	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E-04	1.80E-01	1.19E-03	1.80E+00	1.19E-04	0.00%	0.00%
Aroclor 1268	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Barium	0.00E+00	3.11E-01	0.00E+00	0.00E+00	2.53E+01	7.64E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.64E+01	2.08E+01	1.27E+00	4.17E+01	6.33E-01	0.27%	2.61%
Benzoic Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E+00	0.00E+00	3.33E+00	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	5.96E-04	1.29E-03	0.00E+00	0.00E+00	1.86E-01	5.53E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.43E-01	1.45E+00	1.68E-01	2.00E+01	1.22E-02	0.04%	0.05%
Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Chromium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	1.00E+00	2.40E-01	5.00E+00	4.80E-02	0.05%	0.20%
cis-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Copper	2.83E-03	1.69E-02	0.00E+00	0.00E+00	1.61E+00	5.36E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.68E+00	4.70E+01	3.58E-02	6.17E+01	2.72E-02	0.01%	0.11%
Dieldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.70E-02	0.00E+00	2.31E-01	0.00E+00	0.00%	0.00%
Endrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.16E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.16E-05	3.00E-01	1.05E-04	9.00E-01	3.52E-05	0.00%	0.00%
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.20E-01	0.00E+00	2.76E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.54E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.54E-02	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.58E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.58E-02	NA	NA	NA	NA	NA	NA
Iron	1.43E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.72E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.15E+00	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	1.44E-04	0.00E+00	0.00E+00	5.68E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.69E-02	NA	NA	NA	NA	NA	NA
Lead	1.24E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.26E-01	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E-01	1.13E+00	1.12E-01	1.13E+01	1.12E-02	0.02%	0.05%
Manganese	1.09E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E-01	9.77E+02	1.11E-04	9.77E+03	1.11E-05	0.00%	0.00%
Mercury (inorganic)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.46E-03	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.46E-03	4.50E-01	5.48E-03	9.00E-01	2.74E-03	0.00%	0.01%
Mercury (methyl)	0.00E+00	2.25E-04	0.00E+00	0.00E+00	1.17E-02	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	1.19E-02	6.40E-03	1.86E+00	6.40E-02	1.86E-01	0.40%	0.77%
Mirex	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.70E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.70E-05	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	2.20E-02	0.00E+00	0.00E+00	9.20E-01	1.67E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E+00	7.74E+01	1.43E-02	1.07E+02	1.04E-02	0.00%	0.04%
Nitrate	2.08E-01	3.05E-04	0.00E+00	0.00E+00	1.16E-02	5.79E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.26E-01	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	1.69E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.69E-02	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.39E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.39E-04	1.07E+02	2.24E-06	3.20E+02	7.48E-07	0.00%	0.00%
Pentachloroanisole	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E-05	6.73E+00	3.18E-06	6.73E+01	3.18E-07	0.00%	0.00%
Pentachlorophenol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E+00	0.00E+00	6.73E+01	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.12E-04	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.12E-04	6.50E+01	1.09E-05	1.30E+02	5.47E-06	0.00%	0.00%
Selenium	0.00E+00	2.04E-03	0.00E+00	0.00E+00	1.66E-01	3.29E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.71E-01	1.80E+00	9.51E-02	5.40E+00	3.17E-02	0.02%	0.13%
Silver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E+00	0.00E+00	5.44E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.31E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.31E-02	NA	NA	NA	NA	NA	NA
Sulfate	1.46E+00	4.70E-02	0.00E+00	0.00E+00	1.78E+00	5.60E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.85E+00	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	1.68E-03	0.00E+00	0.00E+00	1.36E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.38E-01	3.50E-01	3.94E-01	1.05E+00	1.31E-01	0.08%	0.54%
trans-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Vanadium	7.98E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.92E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.69E-02	1.14E+01	1.48E-03	3.42E+01	4.94E-04	0.00%	0.00%
Zinc	0.00E+00	8.99E-02	0.00E+00	0.00E+00	1.22E+01	1.57E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.39E+01	1.45E+01	9.57E-01	1.31E+02	1.06E-01	0.21%	0.44%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	4.4E+02	1.7E+01	94.94%	70.90%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.0E-05	2.0E-06	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	2.6E-02	2.6E-03	0.01%	0.01%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	4.3E-03	5.8E-04	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	1.1E-04	3.5E-05	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi \, x Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0.9	unitless
Terr. Invert diet fraction =	0.1	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	3.44E-05	kg/d
Food ingestion rate =	0.00069	kg/d
Body weight =	0.0146	kg
Home range =	49.4	acres
Water intake rate =	0.0035	L/d
Site Area =	486	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-176
Tier 2 COPCs
EEQs and Hazard Indices for the Bank Swallow at LHAAP
Waste Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							---Unitless---									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	5.16E+00	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E-01	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.49E-01	mg/kg	1.00E+00			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.35E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.35E-03	4.22E-01	1.27E-02	1.27E+00	4.23E-03	0.01%	0.04%
2,3,7,8-TCDD TEQ	1.07E-08	mg/L	5.59E-06	mg/kg	3.16E-05	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	2.56E-09	1.32E-08	0.00E+00	0.00E+00	1.11E-06	1.65E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.77E-06	1.40E-05	1.98E-01	1.40E-04	1.98E-02	0.14%	0.19%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	2.47E+02	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.98E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.98E+00	7.00E-02	1.28E+02	1.80E+00	4.99E+00	88.19%	47.05%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	5.56E-01	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.04E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.04E-02	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	1.24E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.55E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.55E-02	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	4.55E-04	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.93E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.93E-05	2.80E-03	6.88E-03	2.80E-02	6.88E-04	0.00%	0.01%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.48E-03	mg/kg	1.00E+00		4.75E+00	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.28E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.28E-05	5.80E-02	1.08E-03	5.80E-01	1.08E-04	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.98E-04	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.70E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.70E-06	2.80E-03	3.11E-03	2.80E-02	3.11E-04	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.37E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.02E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.02E-05	2.14E+00	4.75E-06	1.07E+01	9.50E-07	0.00%	0.00%
Aluminum	4.16E+00	mg/L	8.09E+03	mg/kg	6.95E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	9.96E-01	1.90E+01	0.00E+00	0.00E+00	1.55E+03	1.41E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.57E+03	1.10E+02	1.43E+01	3.29E+02	4.77E+00	9.83%	44.97%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.06E+00	mg/kg	1.00E+00			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.92E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.92E-03	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.22E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.57E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.57E-05	4.10E-01	2.34E-04	1.23E+00	7.78E-05	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.21E-03	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.86E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.86E-04	1.80E-01	1.03E-03	1.80E+00	1.03E-04	0.00%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.94E-03	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.01E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.01E-05	1.80E-01	5.00E-04	1.80E+00	5.00E-05	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	5.33E+02	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	2.78E-01	0.00E+00	0.00E+00	2.26E+01	2.29E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.31E+01	2.08E+01	1.11E+00	4.17E+01	5.54E-01	0.76%	5.22%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E+00	0.00E+00	3.33E+00	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	2.09E-03	mg/L	4.57E-01	mg/kg	4.73E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	2.35E+01	8.80E-01	8.67E-01	8.67E-01	6.72E-01	6.72E-01	5.00E-04	1.08E-03	0.00E+00	0.00E+00	1.17E-02	5.25E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.57E-02	1.45E+00	4.53E-02	2.00E+01	3.29E-03	0.03%	0.03%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.46E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.12E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.12E-02	1.00E+00	2.12E-02	5.00E+00	4.23E-03	0.01%	0.04%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Copper	9.31E-03	mg/L	6.17E+00	mg/kg	1.09E+01	mg/kg	1.00E+00	1.11E+03	1.56E+00	9.82E-01	6.44E-01	4.54E-01	4.54E-01	8.97E-02	8.97E-02	2.23E-03	1.45E-02	0.00E+00	0.00E+00	4.09E-01	5.08E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.77E-01	4.70E+01	1.01E-02	6.17E+01	7.73E-03	0.01%	0.07%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.70E-02	0.00E+00	2.31E-01	0.00E+00	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.17E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.32E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.32E-05	3.00E-01	4.40E-05	9.00E-01	1.47E-05	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.20E-01	0.00E+00	2.76E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.52E-01	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.43E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.43E-03	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	1.03E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.58E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.58E-02	NA	NA	NA	NA	NA	NA
Iron	4.18E+00	mg/L	0.00E+00	mg/kg	1.12E+04	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.90E+00	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	1.44E-04	0.00E+00	0.00E+00	1.21E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.23E-02	NA	NA	NA	NA	NA	NA
Lead	4.09E-03	mg/L	0.00E+00	mg/kg	4.77E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	3.89E-01	NA	4.83E-02	4.83E-02	1.16E-02	1.16E-02	9.80E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.76E-02	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.86E-02	1.13E+00	7.84E-02	1.13E+01	7.84E-03	0.05%	0.07%
Manganese	3.17E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.50E+02	4.20E-01	NA	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	7.59E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.59E-02	9.77E+02	7.77E-05	9.77E+03	7.77E-06	0.00%	0.00%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	9.02E-02	mg/kg	1.00E+00		1.14E+00	5.42E+00	NA	1.11E+00	1.11E+00	9.15E-02	9.15E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.31E-03	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.31E-03	4.50E-01	5.13E-03	9.00E-01	2.57E-03	0.00%	0.02%
Mercury (methyl)	0.00E+00	mg/L	8.35E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	1.15E+00	NA	NA			0.00E+00	1.96E-04	0.00E+00	0.00E+00	4.03E-03	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	4.23E-03	6.40E-03	6.61E-01	6.40E-02	6.61E-02	0.45%	0.62%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.47E-04	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E-05	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	mg/L	8.12E+00	mg/kg	7.04E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	6.43E-02	6.67E-02	6.67E-02	8.71E-02	8.71E-02	0.00E+00	1.91E-02	0.00E+00	0.00E+00	1.68E-01	3.53E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.22E-01	7.74E+01	2.87E-03	1.07E+02	2.08E-03	0.00%	0.02%
Nitrate	4.79E-01	mg/L	9.50E-02	mg/kg	6.12E-01	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	1.15E-01	2.24E-04	0.00E+00	0.00E+00	1.70E-03	8.68E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.18E-01	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	5.55E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02								1.33E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E-02	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	3.21E-03	mg/kg	1.00E+00			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.26E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.26E-04	1.07E+02	1.18E-06	3.20E+02	3.94E-07	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	2.24E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.28E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.28E-06	6.73E+00	1.38E-06	6.73E+01	1.38E-07	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E+00	0.00E+00	6.73E+01	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	9.65E-02	mg/kg	1.00E+00			3.00E-01	NA	2.91E+01	2.91E+01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.37E-04	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.37E-04	6.50E+01	2.11E-06	1.30E+02	1.05E-06	0.00%	0.00%
Selenium	0.00E+00	mg/L	7.51E-01	mg/kg	5.98E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.07E+00	4.92E-01	4.81E-01	4.81E-01	1.51E-01	1.51E-01	0.00E+00	1.77E-03	0.00E+00	0.00E+00	1.44E-01	3.01E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.48E-01	1.80E+00	8.25E-02	5.40E+00	2.75E-02	0.06%	0.26%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E+00	0.00E+00	5.44E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.45E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.01E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.01E-02	NA	NA	NA	NA	NA	NA
Sulfate	5.14E+00	mg/L	1.39E+01	mg/kg	4.14E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	1.23E+00	3.27E-02	0.00E+00	0.00E+00	2.48E-01	5.87E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.57E+00	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	6.14E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00							0.00E+00	1.44E-03	0.00E+00	0.00E+00	1.17E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.19E-01	3.50E-01	3.40E-01	1.05E+00	1.13E-01	0.23%	1.07%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Vanadium	2.64E-02	mg/L	0.00E+00	mg/kg	1.89E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	6.33E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.76E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.01E-02	1.14E+01	8.84E-04	3.42E+01	2.95E-04	0.00%	0.00%
Zinc	0.00E+00	mg/L	3.22E+01	mg/kg	4.92E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	6.23E+00	1.05E+00	8.74E-01	8.74E-01	1.84E-01	1.84E-01	0.00E+00	7.58E-02	0.00E+00	0.00E+00	2.65E+00	1.45E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.18E+00	1.45E+01	2.88E-01	1.31E+02	3.19E-02	0.20%	0.30%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	1.3E+02	5.0E+00	88.19%	47.05%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	4.8E-06	9.5E-07	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	1.1E-02	1.1E-03	0.01%	0.01%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.8E-03	2.3E-04	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	4.4E-05	1.5E-05	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi \, x Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors		
Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0.9	unitless
Terr. Invert diet fraction =	0.1	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	3.44E-05	kg/d
Food ingestion rate =	0.00069	kg/d
Body weight =	0.0146	kg
Home range =	247	acres
Water intake rate =	0.0035	L/d
Site Area =	486	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-177
Tier 1 COPCs
EEQs and Hazard Indices for the American Woodcock at LHAAP
Waste Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF (Unitless)	Fish BAF (Unitless)	Aq. Invert. BAF (Unitless)	Terr. Invert. BAF (Unitless)	Aq. Plant BAF (Unitless)	Terr. Plant BAF (Unitless)	Plant Root BAF (Unitless)	Mammal BAF (Unitless)	Bird BAF (Unitless)
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	8.46E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-01	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00
2,3,7,8-TCDD TEQ	1.22E-08	mg/L	8.87E-06	mg/kg	7.33E-05	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	4.91E+02	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	1.23E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	2.40E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	6.15E-04	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	2.06E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.85E-04	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.90E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Aluminum	6.11E+00	mg/L	9.69E+03	mg/kg	9.02E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.57E+00	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.34E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	5.97E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	2.66E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00
Barium	0.00E+00	mg/L	1.32E+02	mg/kg	1.01E+03	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00
Cadmium	2.49E-03	mg/L	5.48E-01	mg/kg	5.20E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.25E+01	8.11E-01	8.31E-01	8.31E-01	9.22E-01	9.22E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.61E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Copper	1.18E-02	mg/L	7.20E+00	mg/kg	1.37E+01	mg/kg	1.00E+00	5.92E+03	5.25E+00	8.28E-01	5.86E-01	3.96E-01	3.96E-01	1.49E-01	1.49E-01
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	4.39E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.10E-01	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00
Iron	5.98E+00	mg/L	0.00E+00	mg/kg	1.28E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01		
Lead	5.18E-03	mg/L	0.00E+00	mg/kg	7.44E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	3.57E-01	NA	3.97E-02	3.97E-02	1.33E-02	1.33E-02
Manganese	4.54E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+03	2.10E+00	NA	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E-01	mg/kg	1.00E+00		2.87E+00	4.75E+00	NA	1.02E+00	1.02E+00	1.03E-01	1.03E-01
Mercury (methyl)	0.00E+00	mg/L	9.58E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.08E+00	NA	NA		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.52E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00
Nickel	0.00E+00	mg/L	9.33E+00	mg/kg	7.49E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	6.21E-02	6.57E-02	6.57E-02	1.01E-01	1.01E-01
Nitrate	8.67E-01	mg/L	1.30E-01	mg/kg	1.08E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Nitrate/Nitrite	7.06E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	3.51E-03	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	2.98E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	1.32E-01	mg/kg	1.00E+00			1.14E+00	NA	2.56E+01	2.56E+01	1.66E-01	1.66E-01
Selenium	0.00E+00	mg/L	8.67E-01	mg/kg	6.76E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.03E+00	4.99E-01	4.87E-01	4.87E-01	1.95E-01	1.95E-01
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	3.28E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Sulfate	6.09E+00	mg/L	2.00E+01	mg/kg	1.04E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Thallium	0.00E+00	mg/L	7.12E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Vanadium	3.33E-02	mg/L	0.00E+00	mg/kg	2.15E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03
Zinc	0.00E+00	mg/L	3.82E+01	mg/kg	6.24E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.31E+00	9.78E-01	7.87E-01	7.87E-01	4.51E-01	4.51E-01

Chemical	EED Surface Water (mg/kg-d)	EED Sediment (mg/kg-d)	EED Soil (mg/kg-d)	EED Fish (mg/kg-d)	EED Aq. Invert. (mg/kg-d)	EED Terr. Invert. (mg/kg-d)	EED Aq. Plants (mg/kg-d)	EED Terr. Plants (mg/kg-d)	EED Plant Roots (mg/kg-d)	EED Mammals (mg/kg-d)	EED Birds (mg/kg-d)	Total EED (mg/kg-d)	NOAEL (mg/kg-d)	EEQ N	LOAEL (mg/kg-d)	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	1.09E-01	0.00E+00	0.00E+00	1.36E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.37E+01	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	0.00E+00	3.05E-03	0.00E+00	0.00E+00	3.86E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.89E-01	4.22E-01	9.22E-01	1.27E+00	3.07E-01	0.01%	0.07%
2,3,7,8-TCDD TEQ	1.22E-09	0.00E+00	9.41E-07	0.00E+00	0.00E+00	2.01E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.02E-04	1.40E-05	1.44E+01	1.40E-04	1.44E+00	0.12%	0.32%
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	6.30E+00	0.00E+00	0.00E+00	8.08E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.14E+02	7.00E-02	1.16E+04	1.80E+00	4.52E+02	99.70%	98.77%
2,4-Dinitrotoluene	0.00E+00	0.00E+00	1.58E-02	0.00E+00	0.00E+00	2.04E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.05E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	0.00E+00	3.09E-02	0.00E+00	0.00E+00	3.98E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.01E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	0.00E+00	7.90E-06	0.00E+00	0.00E+00	1.18E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.19E-03	2.80E-03	4.23E-01	2.80E-02	4.23E-02	0.00%	0.01%
4,4'-DDE	0.00E+00	0.00E+00	2.64E-05	0.00E+00	0.00E+00	3.96E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.99E-03	5.80E-02	6.88E-02	5.80E-01	6.88E-03	0.00%	0.00%
4,4'-DDT	0.00E+00	0.00E+00	3.66E-06	0.00E+00	0.00E+00	5.66E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.70E-04	2.80E-03	2.04E-01	2.80E-02	2.04E-02	0.00%	0.00%
Aldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	0.00E+00	3.72E-06	0.00E+00	0.00E+00	5.63E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.67E-04	2.14E+00	2.65E-04	1.07E+01	5.30E-05	0.00%	0.00%
Aluminum	6.11E-01	0.00E+00	1.16E+02	0.00E+00	0.00E+00	1.31E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.48E+02	1.10E+02	2.26E+00	3.29E+02	7.53E-01	0.02%	0.16%
Antimony	0.00E+00	0.00E+00	3.29E-02	0.00E+00	0.00E+00	3.61E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.94E-01	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	0.00E+00	4.29E-05	0.00E+00	0.00E+00	6.52E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.56E-03	4.10E-01	1.60E-02	1.23E+00	5.34E-03	0.00%	0.00%
Aroclor 1248	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Aroclor 1254	0.00E+00	0.00E+00	7.67E-05	0.00E+00	0.00E+00	1.19E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E-02	1.80E-01	6.68E-02	1.80E+00	6.68E-03	0.00%	0.00%
Aroclor 1260	0.00E+00	0.00E+00	3.41E-05	0.00E+00	0.00E+00	5.59E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.62E-03	1.80E-01	3.12E-02	1.80E+00	3.12E-03	0.00%	0.00%
Aroclor 1268	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Barium	0.00E+00	0.00E+00	1.30E+01	0.00E+00	0.00E+00	1.99E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.29E+01	2.08E+01	1.58E+00	4.17E+01	7.90E-01	0.01%	0.17%
Benzoic Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E+00	0.00E+00	3.33E+00	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	2.49E-04	0.00E+00	6.68E-03	0.00E+00	0.00E+00	1.44E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.45E+00	1.45E+00	1.00E+00	2.00E+01	7.26E-02	0.01%	0.02%
Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Chromium	0.00E+00	0.00E+00	2.06E-01	0.00E+00	0.00E+00	6.26E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.47E+00	1.00E+00	6.47E+00	5.00E+00	1.29E+00	0.06%	0.28%
cis-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Copper	1.18E-03	0.00E+00	1.76E-01	0.00E+00	0.00E+00	1.40E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.58E+00	4.70E+01	3.35E-02	6.17E+01	2.55E-02	0.00%	0.01%
Dieldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.70E-02	0.00E+00	2.31E-01	0.00E+00	0.00%	0.00%
Endrin	0.00E+00	0.00E+00	5.63E-06	0.00E+00	0.00E+00	8.26E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.32E-04	3.00E-01	2.77E-03	9.00E-01	9.24E-04	0.00%	0.00%
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.20E-01	0.00E+00	2.76E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	0.00E+00	2.69E-03	0.00E+00	0.00E+00	4.01E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.04E-01	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	0.00E+00	1.83E-02	0.00E+00	0.00E+00	2.24E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.26E+00	NA	NA	NA	NA	NA	NA
Iron	5.98E-01	0.00E+00	1.64E+02	0.00E+00	0.00E+00	1.23E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.88E+02	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	5.18E-04	0.00E+00	9.55E-01	0.00E+00	0.00E+00	3.28E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.24E+00	1.13E+00	3.75E+00	1.13E+01	3.75E-01	0.03%	0.08%
Manganese	4.54E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.54E-02	9.77E+02	4.65E-05	9.77E+03	4.65E-06	0.00%	0.00%
Mercury (inorganic)	0.00E+00	0.00E+00	1.41E-03	0.00E+00	0.00E+00	6.43E-02	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.57E-02	4.50E-01	1.46E-01	9.00E-01	7.30E-02	0.00%	0.02%
Mercury (methyl)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	6.40E-03	0.00E+00	6.40E-02	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	0.00E+00	4.52E-06	0.00E+00	0.00E+00	7.04E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.09E-04	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	0.00E+00	9.61E-02	0.00E+00	0.00E+00	4.37E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.46E+00	7.74E+01	5.77E-02	1.07E+02	4.17E-02	0.00%	0.01%
Nitrate	8.67E-02	0.00E+00	1.38E-02	0.00E+00	0.00E+00	1.51E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.52E-01	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	7.06E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.06E-03	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	0.00E+00	4.51E-05	0.00E+00	0.00E+00	6.25E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.29E-03	1.07E+02	5.90E-05	3.20E+02	1.97E-05	0.00%	0.00%
Pentachloroanisole	0.00E+00	0.00E+00	3.82E-06	0.00E+00	0.00E+00	5.58E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.62E-04	6.73E+00	8.34E-05	6.73E+01	8.34E-06	0.00%	0.00%
Pentachlorophenol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E+00	0.00E+00	6.73E+01	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	0.00E+00	1.70E-03	0.00E+00	0.00E+00	1.86E-02	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.03E-02	6.50E+01	3.12E-04	1.30E+02	1.56E-04	0.00%	0.00%
Selenium	0.00E+00	0.00E+00	8.68E-03	0.00E+00	0.00E+00	8.60E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.46E-02	1.80E+00	5.26E-02	5.40E+00	1.75E-02	0.00%	0.00%
Silver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E+00	0.00E+00	5.44E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	0.00E+00	4.21E-01	0.00E+00	0.00E+00	1.12E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.54E+00	NA	NA	NA	NA	NA	NA
Sulfate	6.09E-01	0.00E+00	1.33E+00	0.00E+00	0.00E+00	1.46E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.66E+01	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.50E-01	0.00E+00	1.05E+00	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Vanadium	3.33E-03	0.00E+00	2.75E-01	0.00E+00	0.00E+00	2.33E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.12E-01	1.14E+01	4.49E-02	3.42E+01	1.50E-02	0.00%	0.00%
Zinc	0.00E+00	0.00E+00	8.01E-01	0.00E+00	0.00E+00	4.09E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.17E+01	1.45E+01	2.88E+00	1.31E+02	3.18E-01	0.02%	0.07%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	1.2E+04	4.5E+02	99.70%	98.77%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	2.7E-04	5.3E-05	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	7.0E-01	7.0E-02	0.01%	0.02%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.1E-01	1.5E-02	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	2.8E-03	9.2E-04	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi x Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	1	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.002529	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.0243	kg/d
Body weight =	0.197	kg
Home range =	0.74	acres
Water intake rate =	0.0197	L/d
Site Area =	486	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-178
Tier 2 COPCs
EEQs and Hazard Indices for the American Woodcock at LHAAP
Waste Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
									---Unitless---						
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	5.16E+00	mg/kg	#######			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.49E-01	mg/kg	#######			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01
2,3,7,8-TCDD TEQ	1.07E-08	mg/L	5.59E-06	mg/kg	3.16E-05	mg/kg	#######	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	2.47E+02	mg/kg	#######			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	5.56E-01	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	1.24E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	4.55E-04	mg/kg	#######		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.48E-03	mg/kg	#######		4.75E+00	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.98E-04	mg/kg	#######		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.37E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Aluminum	4.16E+00	mg/L	8.09E+03	mg/kg	6.95E+03	mg/kg	#######	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.06E+00	mg/kg	#######			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.22E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.21E-03	mg/kg	#######		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.94E-03	mg/kg	#######			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	5.33E+02	mg/kg	#######	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01
Cadmium	2.09E-03	mg/L	4.57E-01	mg/kg	4.73E-01	mg/kg	#######	1.15E+03	6.00E-01	2.35E+01	8.80E-01	8.67E-01	8.67E-01	6.72E-01	6.72E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.46E+01	mg/kg	#######	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Copper	9.31E-03	mg/L	6.17E+00	mg/kg	1.09E+01	mg/kg	#######	1.11E+03	1.56E+00	9.82E-01	6.44E-01	4.54E-01	4.54E-01	8.97E-02	8.97E-02
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.17E-04	mg/kg	#######			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.52E-01	mg/kg	#######			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	1.03E+00	mg/kg	#######			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01
Iron	4.18E+00	mg/L	0.00E+00	mg/kg	1.12E+04	mg/kg	#######	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	#######		4.67E+00		1.39E+01	1.39E+01	1.39E+01		
Lead	4.09E-03	mg/L	0.00E+00	mg/kg	4.77E+01	mg/kg	#######	4.48E+02	7.10E-02	3.89E-01	NA	4.83E-02	4.83E-02	1.16E-02	1.16E-02
Manganese	3.17E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	2.50E+02	4.20E-01	NA	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	9.02E-02	mg/kg	#######		1.14E+00	5.42E+00	NA	1.11E+00	1.11E+00	9.15E-02	9.15E-02
Mercury (methyl)	0.00E+00	mg/L	8.35E-02	mg/kg	0.00E+00	mg/kg	#######		1.14E+00	NA	1.15E+00	NA	NA		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.47E-04	mg/kg	#######			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01
Nickel	0.00E+00	mg/L	8.12E+00	mg/kg	7.04E+00	mg/kg	#######		4.86E-01	1.06E+00	6.43E-02	6.67E-02	6.67E-02	8.71E-02	8.71E-02
Nitrate	4.79E-01	mg/L	9.50E-02	mg/kg	6.12E-01	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Nitrate/Nitrite	5.55E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	3.01E+02							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	3.21E-03	mg/kg	#######			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	2.24E-04	mg/kg	#######			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	9.65E-02	mg/kg	#######			3.00E-01	NA	2.91E+01	2.91E+01	1.11E-01	1.11E-01
Selenium	0.00E+00	mg/L	7.51E-01	mg/kg	5.98E-01	mg/kg	#######	2.05E+02	4.50E+00	1.07E+00	4.92E-01	4.81E-01	4.81E-01	1.51E-01	1.51E-01
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.50E+00		1.40E-02	1.40E-02	1.40E-02		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.45E+01	mg/kg	#######		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Sulfate	5.14E+00	mg/L	1.39E+01	mg/kg	4.14E+01	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Thallium	0.00E+00	mg/L	6.14E-01	mg/kg	0.00E+00	mg/kg	#######	7.50E+01	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Vanadium	2.64E-02	mg/L	0.00E+00	mg/kg	1.89E+01	mg/kg	#######	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03
Zinc	0.00E+00	mg/L	3.22E+01	mg/kg	4.92E+01	mg/kg	#######	2.91E+03	1.94E+00	6.23E+00	1.05E+00	8.74E-01	8.74E-01	1.84E-01	1.84E-01

Chemical	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	6.62E-02	0.00E+00	0.00E+00	4.79E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.86E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	0.00E+00	1.92E-03	0.00E+00	0.00E+00	1.40E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-01	4.22E-01	3.35E-01	1.27E+00	1.12E-01	0.01%	0.08%
2,3,7,8-TCDD TEQ	1.07E-09	0.00E+00	4.06E-07	0.00E+00	0.00E+00	4.30E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.34E-05	1.40E-05	3.10E+00	1.40E-04	3.10E-01	0.09%	0.23%
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	3.17E+00	0.00E+00	0.00E+00	2.34E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.38E+02	7.00E-02	3.40E+03	1.80E+00	1.32E+02	99.63%	98.48%
2,4-Dinitrotoluene	0.00E+00	0.00E+00	7.14E-03	0.00E+00	0.00E+00	5.31E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.38E-01	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	0.00E+00	1.60E-02	0.00E+00	0.00E+00	1.19E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	0.00E+00	5.85E-06	0.00E+00	0.00E+00	5.03E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.09E-04	2.80E-03	1.82E-01	2.80E-02	1.82E-02	0.01%	0.01%
4,4'-DDE	0.00E+00	0.00E+00	1.90E-05	0.00E+00	0.00E+00	1.64E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.66E-03	5.80E-02	2.86E-02	5.80E-01	2.86E-03	0.00%	0.00%
4,4'-DDT	0.00E+00	0.00E+00	2.55E-06	0.00E+00	0.00E+00	2.27E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.30E-04	2.80E-03	8.20E-02	2.80E-02	8.20E-03	0.00%	0.01%
Aldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	0.00E+00	3.04E-06	0.00E+00	0.00E+00	2.65E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E-04	2.14E+00	1.25E-04	1.07E+01	2.51E-05	0.00%	0.00%
Aluminum	4.16E-01	0.00E+00	8.93E+01	0.00E+00	0.00E+00	3.69E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E+02	1.10E+02	1.15E+00	3.29E+02	3.85E-01	0.03%	0.29%
Antimony	0.00E+00	0.00E+00	2.65E-02	0.00E+00	0.00E+00	7.63E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.03E-01	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	0.00E+00	2.85E-05	0.00E+00	0.00E+00	2.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.53E-03	4.10E-01	6.16E-03	1.23E+00	2.05E-03	0.00%	0.00%
Aroclor 1248	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Aroclor 1254	0.00E+00	0.00E+00	5.41E-05	0.00E+00	0.00E+00	4.86E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.91E-03	1.80E-01	2.73E-02	1.80E+00	2.73E-03	0.00%	0.00%
Aroclor 1260	0.00E+00	0.00E+00	2.49E-05	0.00E+00	0.00E+00	2.35E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.38E-03	1.80E-01	1.32E-02	1.80E+00	1.32E-03	0.00%	0.00%
Aroclor 1268	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Barium	0.00E+00	0.00E+00	6.84E+00	0.00E+00	0.00E+00	5.98E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E+01	2.08E+01	6.17E-01	4.17E+01	3.08E-01	0.02%	0.23%
Benzoic Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E+00	0.00E+00	3.33E+00	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	2.09E-04	0.00E+00	6.07E-03	0.00E+00	0.00E+00	1.37E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.38E+00	1.45E+00	9.49E-01	2.00E+01	6.88E-02	0.03%	0.05%
Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Chromium	0.00E+00	0.00E+00	1.88E-01	0.00E+00	0.00E+00	5.52E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.40E-01	1.00E+00	7.40E-01	5.00E+00	1.48E-01	0.02%	0.11%
cis-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Copper	9.31E-04	0.00E+00	1.40E-01	0.00E+00	0.00E+00	1.32E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.47E+00	4.70E+01	3.12E-02	6.17E+01	2.38E-02	0.00%	0.02%
Dieldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.70E-02	0.00E+00	2.31E-01	0.00E+00	0.00%	0.00%
Endrin	0.00E+00	0.00E+00	4.07E-06	0.00E+00	0.00E+00	3.44E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.48E-04	3.00E-01	1.16E-03	9.00E-01	3.87E-04	0.00%	0.00%
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.20E-01	0.00E+00	2.76E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	0.00E+00	1.95E-03	0.00E+00	0.00E+00	1.68E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.70E-01	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	0.00E+00	1.33E-02	0.00E+00	0.00E+00	9.35E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.48E-01	NA	NA	NA	NA	NA	NA
Iron	4.18E-01	0.00E+00	1.44E+02	0.00E+00	0.00E+00	4.97E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.94E+02	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	4.09E-04	0.00E+00	6.12E-01	0.00E+00	0.00E+00	2.29E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.90E+00	1.13E+00	2.57E+00	1.13E+01	2.57E-01	0.08%	0.19%
Manganese	3.17E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.17E-02	9.77E+02	3.24E-05	9.77E+03	3.24E-06	0.00%	0.00%
Mercury (inorganic)	0.00E+00	0.00E+00	1.16E-03	0.00E+00	0.00E+00	6.03E-02	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.14E-02	4.50E-01	1.37E-01	9.00E-01	6.83E-02	0.00%	0.05%
Mercury (methyl)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	6.40E-03	0.00E+00	6.40E-02	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	0.00E+00	3.17E-06	0.00E+00	0.00E+00	2.85E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.89E-04	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	0.00E+00	9.04E-02	0.00E+00	0.00E+00	9.20E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.01E+00	7.74E+01	1.31E-02	1.07E+02	9.45E-03	0.00%	0.01%
Nitrate	4.79E-02	0.00E+00	7.86E-03	0.00E+00	0.00E+00	2.27E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.84E-02	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	5.55E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.55E-03	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	0.00E+00	4.11E-05	0.00E+00	0.00E+00	3.29E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.33E-03	1.07E+02	3.12E-05	3.20E+02	1.04E-05	0.00%	0.00%
Pentachloroanisole	0.00E+00	0.00E+00	2.88E-06	0.00E+00	0.00E+00	2.42E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.45E-04	6.73E+00	3.64E-05	6.73E+01	3.64E-06	0.00%	0.00%
Pentachlorophenol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E+00	0.00E+00	6.73E+01	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	0.00E+00	1.24E-03	0.00E+00	0.00E+00	3.57E-03	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.81E-03	6.50E+01	7.40E-05	1.30E+02	3.70E-05	0.00%	0.00%
Selenium	0.00E+00	0.00E+00	7.68E-03	0.00E+00	0.00E+00	7.87E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.63E-02	1.80E+00	4.80E-02	5.40E+00	1.60E-02	0.00%	0.01%
Silver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E+00	0.00E+00	5.44E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	0.00E+00	3.15E-01	0.00E+00	0.00E+00	2.63E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.78E-01	NA	NA	NA	NA	NA	NA
Sulfate	5.14E-01	0.00E+00	5.32E-01	0.00E+00	0.00E+00	1.53E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.58E+00	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.50E-01	0.00E+00	1.05E+00	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Vanadium	2.64E-03	0.00E+00	2.43E-01	0.00E+00	0.00E+00	9.80E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.44E-01	1.14E+01	3.01E-02	3.42E+01	1.00E-02	0.00%	0.01%
Zinc	0.00E+00	0.00E+00	6.32E-01	0.00E+00	0.00E+00	3.78E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.85E+01	1.45E+01	2.65E+00	1.31E+02	2.94E-01	0.08%	0.22%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	3.4E+03	1.3E+02	99.63%	98.48%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.3E-04	2.5E-05	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	2.9E-01	2.9E-02	0.01%	0.02%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	4.7E-02	6.1E-03	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	1.2E-03	3.9E-04	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	1	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.002529	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.0243	kg/d
Body weight =	0.197	kg
Home range =	57	acres
Water intake rate =	0.0197	L/d
Site Area =	486	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-179
Tier 1 COPCs
EEQs and Hazard Indices for the Belted Kingfisher at LHAAP
Waste Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							----Unitless----									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	8.46E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-01	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.22E-01	0.00E+00	1.27E+00	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	1.22E-08	mg/L	8.87E-06	mg/kg	7.33E-05	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	1.32E-09	6.19E-08	0.00E+00	2.54E-04	3.39E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.57E-04	1.40E-05	1.84E+01	1.40E-04	1.84E+00	62.44%	34.79%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	4.91E+02	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	1.23E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	2.40E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	6.15E-04	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.80E-03	0.00E+00	2.80E-02	0.00E+00	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	2.06E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.80E-02	0.00E+00	5.80E-01	0.00E+00	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.85E-04	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.80E-03	0.00E+00	2.80E-02	0.00E+00	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.90E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Aluminum	6.11E+00	mg/L	9.69E+03	mg/kg	9.02E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	6.61E-01	6.77E+01	0.00E+00	3.22E+00	7.63E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.34E+02	1.10E+02	7.60E+00	3.29E+02	2.53E+00	25.84%	47.99%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.57E+00	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.34E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.10E-01	0.00E+00	1.23E+00	0.00E+00	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	5.97E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	2.66E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Barium	0.00E+00	mg/L	1.32E+02	mg/kg	1.01E+03	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	9.24E-01	0.00E+00	0.00E+00	1.04E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E+01	2.08E+01	5.45E-01	4.17E+01	2.72E-01	1.85%	5.15%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E+00	0.00E+00	3.33E+00	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	2.49E-03	mg/L	5.48E-01	mg/kg	5.20E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.25E+01	8.11E-01	8.31E-01	8.31E-01	9.22E-01	9.22E-01	2.69E-04	3.83E-03	0.00E+00	4.96E-01	7.65E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.77E-01	1.45E+00	3.98E-01	2.00E+01	2.88E-02	1.35%	0.55%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.61E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Copper	1.18E-02	mg/L	7.20E+00	mg/kg	1.37E+01	mg/kg	1.00E+00	5.92E+03	5.25E+00	8.28E-01	5.86E-01	3.96E-01	3.96E-01	1.49E-01	1.49E-01	1.28E-03	5.03E-02	0.00E+00	8.55E+00	6.61E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.26E+00	4.70E+01	1.97E-01	6.17E+01	1.50E-01	0.67%	2.84%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.70E-02	0.00E+00	2.31E-01	0.00E+00	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	4.39E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-02	0.00E+00	1.00E-01	0.00E+00	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.20E-01	0.00E+00	2.76E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.10E-01	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Iron	5.98E+00	mg/L	0.00E+00	mg/kg	1.28E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	6.46E-01	0.00E+00	0.00E+00	7.31E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.32E+02	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	4.26E-04	0.00E+00	0.00E+00	2.33E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.38E-02	NA	NA	NA	NA	NA	NA
Lead	5.18E-03	mg/L	0.00E+00	mg/kg	7.44E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	3.57E-01	NA	3.97E-02	3.97E-02	1.33E-02	1.33E-02	5.60E-04	0.00E+00	0.00E+00	9.51E-01	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.51E-01	3.85E+00	2.47E-01	1.16E+01	8.24E-02	0.84%	1.56%
Manganese	4.54E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+03	2.10E+00	NA	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	4.91E-02	0.00E+00	0.00E+00	1.11E+02	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E+02	9.77E+02	1.14E-01	9.77E+03	1.14E-02	0.39%	0.22%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E-01	mg/kg	1.00E+00		2.87E+00	4.75E+00	NA	1.02E+00	1.02E+00	1.03E-01	1.03E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.50E-01	0.00E+00	9.00E-01	0.00E+00	0.00%	0.00%
Mercury (methyl)	0.00E+00	mg/L	9.58E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.08E+00	NA	NA			0.00E+00	6.69E-04	0.00E+00	0.00E+00	4.80E-03	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	5.47E-03	6.40E-03	8.55E-01	6.40E-02	8.55E-02	2.90%	1.62%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.52E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	mg/L	9.33E+00	mg/kg	7.49E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	6.21E-02	6.57E-02	6.57E-02	1.01E-01	1.01E-01	0.00E+00	6.51E-02	0.00E+00	0.00E+00	3.78E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.43E-01	7.74E+01	5.73E-03	1.07E+02	4.14E-03	0.02%	0.08%
Nitrate	8.67E-01	mg/L	1.30E-01	mg/kg	1.08E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	9.38E-02	9.06E-04	0.00E+00	1.13E+02	4.76E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E+02	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	7.06E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03								7.63E-03	0.00E+00	0.00E+00	9.23E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.24E+00	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	3.51E-03	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+02	0.00E+00	3.20E+02	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	2.98E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E+00	0.00E+00	6.73E+01	0.00E+00	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E+00	0.00E+00	6.73E+01	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	1.32E-01	mg/kg	1.00E+00			1.14E+00	NA	2.56E+01	2.56E+01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.50E+01	0.00E+00	1.30E+02	0.00E+00	0.00%	0.00%
Selenium	0.00E+00	mg/L	8.67E-01	mg/kg	6.76E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.03E+00	4.99E-01	4.87E-01	4.87E-01	1.95E-01	1.95E-01	0.00E+00	6.05E-03	0.00E+00	0.00E+00	6.82E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.42E-02	4.40E-01	1.69E-01	1.50E+00	4.95E-02	0.57%	0.94%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E+00	0.00E+00	5.44E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	3.28E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Sulfate	6.09E+00	mg/L	2.00E+01	mg/kg	1.04E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	6.59E-01	1.39E-01	0.00E+00	7.96E+02	7.33E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.98E+02	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	7.12E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00							0.00E+00	4.97E-03	0.00E+00	0.00E+00	5.60E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.10E-02	3.50E-01	1.74E-01	1.05E+00	5.81E-02	0.59%	1.10%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Vanadium	3.33E-02	mg/L	0.00E+00	mg/kg	2.15E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	3.60E-03	0.00E+00	0.00E+00	4.35E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.36E+00	1.14E+01	3.82E-01	3.42E+01	1.27E-01	1.30%	2.41%
Zinc	0.00E+00	mg/L	3.82E+01	mg/kg	6.24E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.31E+00	9.78E-01	7.87E-01	7.87E-01	4.51E-01	4.51E-01	0.00E+00	2.67E-01	0.00E+00	0.00E+00	5.02E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.29E+00	1.45E+01	3.65E-01	1.31E+02	4.04E-02	1.24%	0.76%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	0.0E+00	0.0E+00	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	0.0E+00	0.0E+00	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.875	unitless
Aq. Invert diet fraction =	0.125	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0.001034	kg/d
Food ingestion rate =	0.0207	kg/d
Body weight =	0.148	kg
Home range =	118.6101	acres
Water intake rate =	0.016	L/d
Site Area =	262	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-180
Tier 2 COPCs
EEQs and Hazard Indices for the Belted Kingfisher at LHAAP
Waste Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							---Unitless---									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	5.16E+00	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.49E-01	mg/kg	1.00E+00			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.22E-01	0.00E+00	1.27E+00	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	1.07E-08	mg/L	5.59E-06	mg/kg	3.16E-05	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	1.63E-10	5.52E-09	0.00E+00	4.26E-06	6.45E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.33E-06	1.40E-05	3.09E-01	1.40E-04	3.09E-02	21.57%	7.81%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	2.47E+02	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	5.56E-01	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	1.24E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	4.55E-04	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.80E-03	0.00E+00	2.80E-02	0.00E+00	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.48E-03	mg/kg	1.00E+00		4.75E+00	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.80E-02	0.00E+00	5.80E-01	0.00E+00	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.98E-04	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.80E-03	0.00E+00	2.80E-02	0.00E+00	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.37E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Aluminum	4.16E+00	mg/L	8.09E+03	mg/kg	6.95E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	6.35E-02	7.99E+00	0.00E+00	3.09E-01	9.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.84E+01	1.10E+02	8.97E-01	3.29E+02	2.99E-01	62.49%	75.43%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.06E+00	mg/kg	1.00E+00			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.22E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.10E-01	0.00E+00	1.23E+00	0.00E+00	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.21E-03	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.94E-03	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	5.33E+02	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	1.17E-01	0.00E+00	0.00E+00	1.31E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.43E+00	2.08E+01	6.88E-02	4.17E+01	3.43E-02	4.79%	8.66%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E+00	0.00E+00	3.33E+00	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	2.09E-03	mg/L	4.57E-01	mg/kg	4.73E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	2.35E+01	8.80E-01	8.67E-01	8.67E-01	6.72E-01	6.72E-01	3.19E-05	4.52E-04	0.00E+00	4.14E-02	6.78E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.26E-02	1.45E+00	2.94E-02	2.00E+01	2.13E-03	2.05%	0.54%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.46E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00%	0.00%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Copper	9.31E-03	mg/L	6.17E+00	mg/kg	1.09E+01	mg/kg	1.00E+00	1.11E+03	1.56E+00	9.82E-01	6.44E-01	4.54E-01	4.54E-01	8.97E-02	8.97E-02	1.42E-04	6.09E-03	0.00E+00	1.79E-01	2.38E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.09E-01	4.70E+01	4.45E-03	6.17E+01	3.39E-03	0.31%	0.86%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.70E-02	0.00E+00	2.31E-01	0.00E+00	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.17E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-02	0.00E+00	1.00E-01	0.00E+00	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.20E-01	0.00E+00	2.76E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.52E-01	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	1.03E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Iron	4.18E+00	mg/L	0.00E+00	mg/kg	1.12E+04	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	6.38E-02	0.00E+00	0.00E+00	1.81E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.81E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	6.02E-05	0.00E+00	0.00E+00	7.04E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.64E-04	NA	NA	NA	NA	NA	NA
Lead	4.09E-03	mg/L	0.00E+00	mg/kg	4.77E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	3.89E-01	NA	4.83E-02	4.83E-02	1.16E-02	1.16E-02	6.25E-05	0.00E+00	0.00E+00	3.17E-02	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.18E-02	3.85E+00	8.25E-03	1.16E+01	2.75E-03	0.58%	0.69%
Manganese	3.17E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.50E+02	4.20E-01	NA	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	4.84E-03	0.00E+00	0.00E+00	1.37E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.37E+00	9.77E+02	1.41E-03	9.77E+03	1.41E-04	0.10%	0.04%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	9.02E-02	mg/kg	1.00E+00		1.14E+00	5.42E+00	NA	1.11E+00	1.11E+00	9.15E-02	9.15E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.50E-01	0.00E+00	9.00E-01	0.00E+00	0.00%	0.00%
Mercury (methyl)	0.00E+00	mg/L	8.35E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	1.15E+00	NA	NA			0.00E+00	8.24E-05	0.00E+00	0.00E+00	2.34E-04	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	3.17E-04	6.40E-03	4.95E-02	6.40E-02	4.95E-03	3.45%	1.25%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.47E-04	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	mg/L	8.12E+00	mg/kg	7.04E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	6.43E-02	6.67E-02	6.67E-02	8.71E-02	8.71E-02	0.00E+00	8.02E-03	0.00E+00	0.00E+00	9.76E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.78E-02	7.74E+01	2.30E-04	1.07E+02	1.66E-04	0.02%	0.04%
Nitrate	4.79E-01	mg/L	9.50E-02	mg/kg	6.12E-01	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	7.32E-03	9.38E-05	0.00E+00	2.49E+00	9.86E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E+00	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	5.55E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02								8.48E-04	0.00E+00	0.00E+00	2.89E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.90E-01	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	3.21E-03	mg/kg	1.00E+00			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+02	0.00E+00	3.20E+02	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	2.24E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E+00	0.00E+00	6.73E+01	0.00E+00	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E+00	0.00E+00	6.73E+01	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	9.65E-02	mg/kg	1.00E+00			3.00E-01	NA	2.91E+01	2.91E+01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.50E+01	0.00E+00	1.30E+02	0.00E+00	0.00%	0.00%
Selenium	0.00E+00	mg/L	7.51E-01	mg/kg	5.98E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.07E+00	4.92E-01	4.81E-01	4.81E-01	1.51E-01	1.51E-01	0.00E+00	7.41E-04	0.00E+00	0.00E+00	8.35E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.09E-03	4.40E-01	2.07E-02	1.50E+00	6.06E-03	1.44%	1.53%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E+00	0.00E+00	5.44E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.45E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Sulfate	5.14E+00	mg/L	1.39E+01	mg/kg	4.14E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	7.85E-02	1.37E-02	0.00E+00	2.67E+01	1.44E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+01	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	6.14E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00							0.00E+00	6.06E-04	0.00E+00	0.00E+00	6.83E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.43E-03	3.50E-01	2.12E-02	1.05E+00	7.08E-03	1.48%	1.79%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Vanadium	2.64E-02	mg/L	0.00E+00	mg/kg	1.89E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	4.03E-04	0.00E+00	0.00E+00	1.37E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.38E-01	1.14E+01	1.21E-02	3.42E+01	4.03E-03	0.84%	1.02%
Zinc	0.00E+00	mg/L	3.22E+01	mg/kg	4.92E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	6.23E+00	1.05E+00	8.74E-01	8.74E-01	1.84E-01	1.84E-01	0.00E+00	3.18E-02	0.00E+00	0.00E+00	1.54E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.86E-01	1.45E+01	1.28E-02	1.31E+02	1.42E-03	0.89%	0.36%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	0.0E+00	0.0E+00	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	0.0E+00	0.0E+00	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\, x\, Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.875	unitless
Aq. Invert diet fraction =	0.125	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0.001034	kg/d
Food ingestion rate =	0.0207	kg/d
Body weight =	0.148	kg
Home range =	1853	acres
Water intake rate =	0.016	L/d
Site Area =	262	acres
Area Use Factor (AUF) =	0.141392	unitless
Exposure Duration (ED) =	1	unitless

Table E-181
Tier 1 COPCs
EEQs and Hazard Indices for the Red-tailed Hawk at LHAAP
Waste Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							---Unitless---									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	8.46E+00	mg/kg	#######			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.63E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.55E-02	1.67E-02	1.15E-01	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-01	mg/kg	#######			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	7.40E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.69E-03	4.69E-04	3.23E-03	4.22E-01	7.65E-03	1.27E+00	2.55E-03	0.01%	0.07%
2,3,7,8-TCDD TEQ	1.22E-08	mg/L	8.87E-06	mg/kg	7.33E-05	mg/kg	#######	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	3.58E-10	0.00E+00	2.28E-08	8.38E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.37E-08	7.64E-09	8.46E-06	1.40E-05	6.04E-01	1.40E-04	6.04E-02	0.63%	1.58%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	4.91E+02	mg/kg	#######			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.53E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.54E+00	9.68E-01	6.66E+00	7.00E-02	9.52E+01	1.80E+00	3.70E+00	99.13%	96.69%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	1.23E+00	mg/kg	#######			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.82E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.39E-02	2.42E-03	1.67E-02	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	2.40E+00	mg/kg	#######			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	7.47E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.71E-02	4.74E-03	3.26E-02	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	6.15E-04	mg/kg	#######		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.91E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.94E-06	1.21E-06	8.35E-06	2.80E-03	2.98E-03	2.80E-02	2.98E-04	0.00%	0.01%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	2.06E-03	mg/kg	#######		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	6.40E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-05	3.50E-06	2.42E-05	5.80E-02	4.17E-04	5.80E-01	4.17E-05	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.85E-04	mg/kg	#######		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	0.00E+00	8.87E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.65E-06	8.11E-07	5.55E-06	2.80E-03	1.98E-03	2.80E-02	1.98E-04	0.00%	0.01%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.90E-04	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	9.01E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.27E-06	5.71E-07	3.93E-06	2.14E+00	1.84E-06	1.07E+01	3.68E-07	0.00%	0.00%
Aluminum	6.11E+00	mg/L	9.69E+03	mg/kg	9.02E+03	mg/kg	#######	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	1.79E-01	0.00E+00	2.81E+00	1.06E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.65E-01	1.34E-01	3.99E+00	1.10E+02	3.64E-02	3.29E+02	1.21E-02	0.04%	0.32%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.57E+00	mg/kg	#######			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	7.98E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.18E-03	7.29E-04	5.70E-03	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.34E-03	mg/kg	#######			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.04E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.77E-05	6.59E-06	4.54E-05	4.10E-01	1.11E-04	1.23E+00	3.69E-05	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	5.97E-03	mg/kg	#######		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	0.00E+00	1.86E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.21E-05	1.08E-05	7.48E-05	1.80E-01	4.16E-04	1.80E+00	4.16E-05	0.00%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	2.66E-03	mg/kg	#######			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	8.26E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.99E-05	8.72E-06	5.95E-05	1.80E-01	3.30E-04	1.80E+00	3.30E-05	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Barium	0.00E+00	mg/L	1.32E+02	mg/kg	1.01E+03	mg/kg	#######	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	0.00E+00	3.14E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.28E-01	5.73E-02	7.00E-01	2.08E+01	3.36E-02	4.17E+01	1.68E-02	0.04%	0.44%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E+00	0.00E+00	3.33E+00	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	2.49E-03	mg/L	5.48E-01	mg/kg	5.20E-01	mg/kg	#######	1.63E+03	7.99E+00	2.25E+01	8.11E-01	8.31E-01	8.31E-01	9.22E-01	9.22E-01	7.30E-05	0.00E+00	1.62E-04	1.64E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.70E-03	8.20E-04	2.21E-02	1.45E+00	1.53E-02	2.00E+01	1.11E-03	0.02%	0.03%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.61E+01	mg/kg	#######	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	0.00E+00	0.00E+00	4.99E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.24E-02	9.16E-03	6.66E-02	1.00E+00	6.66E-02	5.00E+00	1.33E-02	0.07%	0.35%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Copper	1.18E-02	mg/L	7.20E+00	mg/kg	1.37E+01	mg/kg	#######	5.92E+03	5.25E+00	8.28E-01	5.86E-01	3.96E-01	3.96E-01	1.49E-01	1.49E-01	3.47E-04	0.00E+00	4.26E-03	2.82E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-02	3.50E-03	3.11E-01	4.70E+01	6.61E-03	6.17E+01	5.03E-03	0.01%	0.13%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.70E-02	0.00E+00	2.31E-01	0.00E+00	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	4.39E-04	mg/kg	#######			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	1.36E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.23E-06	9.13E-07	6.28E-06	1.00E-02	6.28E-04	1.00E-01	6.28E-05	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.20E-01	0.00E+00	2.76E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.10E-01	mg/kg	#######			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	6.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.36E-03	4.13E-04	2.84E-03	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+00	mg/kg	#######			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.43E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.61E-02	2.81E-03	1.93E-02	NA	NA	NA	NA	NA	NA
Iron	5.98E+00	mg/L	0.00E+00	mg/kg	1.28E+04	mg/kg	#######	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	1.75E-01	0.00E+00	3.98E+00	2.42E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.59E-01	4.53E-02	2.86E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	#######		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	5.18E-03	mg/L	0.00E+00	mg/kg	7.44E+01	mg/kg	#######	1.50E+03	6.07E-01	3.57E-01	NA	3.97E-02	3.97E-02	1.33E-02	1.33E-02	1.52E-04	0.00E+00	2.31E-02	3.14E-02	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	9.69E-03	1.69E-03	6.61E-02	3.85E+00	1.72E-02	1.16E+01	5.72E-03	0.02%	0.15%
Manganese	4.54E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	2.00E+03	2.10E+00	NA	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	1.33E-02	0.00E+00	0.00E+00	3.67E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.69E+00	9.77E+02	3.77E-03	9.77E+03	3.77E-04	0.00%	0.01%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E-01	mg/kg	#######		2.87E+00	4.75E+00	NA	1.02E+00	1.02E+00	1.03E-01	1.03E-01	0.00E+00	0.00E+00	3.41E-05	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	1.11E-04	1.93E-05	1.64E-04	4.50E-01	3.65E-04	9.00E-01	1.82E-04	0.00%	0.00%
Mercury (methyl)	0.00E+00	mg/L	9.58E-02	mg/kg	0.00E+00	mg/kg	#######		2.87E+00	NA	1.08E+00	NA	NA			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	6.40E-03	0.00E+00	6.40E-02	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.52E-04	mg/kg	#######			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.09E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.97E-06	6.94E-07	4.77E-06	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	mg/L	9.33E+00	mg/kg	7.49E+00	mg/kg	#######		2.32E+00	4.73E+00	6.21E-02	6.57E-02	6.57E-02	1.01E-01	1.01E-01	0.00E+00	0.00E+00	2.33E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.41E-03	1.29E-03	1.10E-02	7.74E+01	1.43E-04	1.07E+02	1.03E-04	0.00%	0.00%
Nitrate	8.67E-01	mg/L	1.30E-01	mg/kg	1.08E+00	mg/kg	#######	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	2.55E-02	0.00E+00	3.34E-04	3.74E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.75E-03	3.06E-04	3.77E+00	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	7.06E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	1.07E+03								2.07E-03	0.00E+00	0.00E+00	3.05E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.07E-01	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	3.51E-03	mg/kg	#######			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.09E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.96E-05	6.92E-06	4.76E-05	1.07E+02	4.46E-07	3.20E+02	1.49E-07	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	2.98E-04	mg/kg	#######			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	9.26E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.36E-06	5.87E-07	4.04E-06	6.73E+00	6.01E-07	6.73E+01	6.01E-08	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E+00	0.00E+00	6.73E+01	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	1.32E-01	mg/kg	#######			1.14E+00	NA	2.56E+01	2.56E+01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	4.11E-05	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	2.15E-04	3.75E-05	2.94E-04	6.50E+01	4.52E-06	1.30E+02	2.26E-06	0.00%	0.00%
Selenium	0.00E+00	mg/L	8.67E-01	mg/kg	6.76E-01	mg/kg	#######	2.05E+02	4.50E+00	1.03E+00	4.99E-01	4.87E-01	4.87E-01	1.95E-01	1.95E-01	0.00E+00	0.00E+00	2.10E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.29E-03	2.25E-04	1.73E-03	4.40E-01	3.92E-03	1.50E+00	1.15E-03	0.00%	0.03%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E+00	0.00E+00	5.44E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	3.28E+01	mg/kg	#######		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	1.02E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.34E-02	9.32E-03	7.29E-02	NA	NA	NA	NA	NA	NA
Sulfate	6.09E+00	mg/L	2.00E+01	mg/kg	1.04E+02	mg/kg	#######	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	1.79E-01	0.00E+00	3.23E-02	2.63E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.69E-01	2.96E-02	2.67E+01	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	7.12E-01	mg/kg	0.00E+00	mg/kg	#######	1.59E+04	4.50E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.50E-01	0.00E+00	1.05E+00	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Vanadium	3.33E-02	mg/L	0.00E+00	mg/kg	2.15E+01	mg/kg	#######	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	9.78E-04	0.00E+00	6.67E-03	1.44E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.24E-03	2.17E-04	1.53E-01	1.14E+01	1.34E-02	3.42E+01	4.47E-03	0.01%	0.12%
Zinc	0.00E+00	mg/L	3.82E+01	mg/kg	6.24E+01	mg/kg	#######	5.00E+03	7.53E+00	5.31E+00	9.78E-01	7.87E-01	7.87E-01	4.51E-01	4.51E-01	0.00E+00	0.00E+00	1.94E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.76E-01	4.81E-02	3.43E-01	1.45E+01	2.37E-02	1.31E+02	2.62E-03	0.02%	0.07%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	9.5E+01	3.7E+00	99.13%	96.69%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.8E-06	3.7E-07	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	5.4E-03	5.4E-04	0.01%	0.01%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	8.6E-04	1.1E-04	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	6.3E-04	6.3E-05	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRixCij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.26	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0.63	unitless
Bird diet fraction =	0.11	unitless
Soil ingestion rate =	0.000678	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.0339	kg/d
Body weight =	1.126	kg
Home range =	941	acres
Water intake rate =	0.064	L/d
Site Area =	486	acres
Area Use Factor (AUF) =	0.516472	unitless
Exposure Duration (ED) =	1	unitless

Table E-182
Tier 2 COPCs
EEQs and Hazard Indices for the Red-tailed Hawk at LHAAP
Waste Sub-Area/Central Creek Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							---Unitless---									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	5.16E+00	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	8.76E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.42E-02	4.22E-03	2.93E-02	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.49E-01	mg/kg	1.00E+00			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.54E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.01E-04	1.22E-04	8.48E-04	4.22E-01	2.01E-03	1.27E+00	6.70E-04	0.01%	0.08%
2,3,7,8-TCDD TEQ	1.07E-08	mg/L	5.59E-06	mg/kg	3.16E-05	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	1.71E-10	0.00E+00	5.38E-09	5.44E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.01E-09	1.40E-09	5.59E-07	1.40E-05	3.99E-02	1.40E-04	3.99E-03	0.20%	0.50%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	2.47E+02	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.20E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.16E+00	2.03E-01	1.40E+00	7.00E-02	2.01E+01	1.80E+00	7.80E-01	99.53%	97.57%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	5.56E-01	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	9.45E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.61E-03	4.55E-04	3.16E-03	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	1.24E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.11E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.84E-03	1.02E-03	7.07E-03	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	4.55E-04	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	7.74E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E-06	3.73E-07	2.59E-06	2.80E-03	9.24E-04	2.80E-02	9.24E-05	0.00%	0.01%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.48E-03	mg/kg	1.00E+00		4.75E+00	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	2.51E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.44E-06	1.30E-06	9.00E-06	5.80E-02	1.55E-04	5.80E-01	1.55E-05	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.98E-04	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	3.37E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.42E-07	1.64E-07	1.14E-06	2.80E-03	4.07E-04	2.80E-02	4.07E-05	0.00%	0.01%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.37E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.02E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E-06	1.94E-07	1.35E-06	2.14E+00	6.29E-07	1.07E+01	1.26E-07	0.00%	0.00%
Aluminum	4.16E+00	mg/L	8.09E+03	mg/kg	6.95E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	6.67E-02	0.00E+00	1.18E+00	3.95E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.47E-01	4.31E-02	1.58E+00	1.10E+02	1.44E-02	3.29E+02	4.79E-03	0.07%	0.60%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.06E+00	mg/kg	1.00E+00			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	3.50E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.22E-03	2.13E-04	1.79E-03	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.22E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.78E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.04E-05	1.82E-06	1.26E-05	4.10E-01	3.08E-05	1.23E+00	1.03E-05	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.21E-03	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	7.15E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.12E-05	1.96E-06	1.39E-05	1.80E-01	7.72E-05	1.80E+00	7.72E-06	0.00%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.94E-03	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	3.29E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.73E-05	3.03E-06	2.07E-05	1.80E-01	1.15E-04	1.80E+00	1.15E-05	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Barium	0.00E+00	mg/L	1.18E+02	mg/kg	5.33E+02	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	0.00E+00	9.06E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.71E-02	9.97E-03	1.58E-01	2.08E+01	7.58E-03	4.17E+01	3.78E-03	0.04%	0.47%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E+00	0.00E+00	3.33E+00	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	2.09E-03	mg/L	4.57E-01	mg/kg	4.73E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	2.35E+01	8.80E-01	8.67E-01	8.67E-01	6.72E-01	6.72E-01	3.34E-05	0.00E+00	8.03E-05	5.29E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.70E-03	2.97E-04	7.40E-03	1.45E+00	5.10E-03	2.00E+01	3.70E-04	0.03%	0.05%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Chromium	0.00E+00	mg/L	0.00E+00	mg/kg	1.46E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	0.00E+00	0.00E+00	2.49E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.63E-03	1.16E-03	1.03E-02	1.00E+00	1.03E-02	5.00E+00	2.05E-03	0.05%	0.26%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Copper	9.31E-03	mg/L	6.17E+00	mg/kg	1.09E+01	mg/kg	1.00E+00	1.11E+03	1.56E+00	9.82E-01	6.44E-01	4.54E-01	4.54E-01	8.97E-02	8.97E-02	1.49E-04	0.00E+00	1.86E-03	2.29E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.25E-03	9.17E-04	3.10E-02	4.70E+01	6.60E-04	6.17E+01	5.03E-04	0.00%	0.06%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.70E-02	0.00E+00	2.31E-01	0.00E+00	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.17E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	5.39E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.06E-06	3.60E-07	2.47E-06	1.00E-02	2.47E-04	1.00E-01	2.47E-05	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.20E-01	0.00E+00	2.76E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.52E-01	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.59E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.14E-04	1.25E-04	8.64E-04	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	1.03E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.75E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.84E-03	8.46E-04	5.86E-03	NA	NA	NA	NA	NA	NA
Iron	4.18E+00	mg/L	0.00E+00	mg/kg	1.12E+04	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	6.70E-02	0.00E+00	1.90E+00	2.31E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E-01	1.84E-02	4.40E+00	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	6.10E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	4.09E-03	mg/L	0.00E+00	mg/kg	4.77E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	3.89E-01	NA	4.83E-02	4.83E-02	1.16E-02	1.16E-02	6.56E-05	0.00E+00	8.10E-03	4.05E-03	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	2.97E-03	5.19E-04	1.57E-02	3.85E+00	4.08E-03	1.16E+01	1.36E-03	0.02%	0.17%
Manganese	3.17E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.50E+02	4.20E-01	NA	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	5.08E-03	0.00E+00	0.00E+00	1.75E-01	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	9.77E+02	1.84E-04	9.77E+03	1.84E-05	0.00%	0.00%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	9.02E-02	mg/kg	1.00E+00		1.14E+00	5.42E+00	NA	1.11E+00	1.11E+00	9.15E-02	9.15E-02	0.00E+00	0.00E+00	1.53E-05	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	4.42E-05	7.71E-06	6.72E-05	4.50E-01	1.49E-04	9.00E-01	7.46E-05	0.00%	0.01%
Mercury (methyl)	0.00E+00	mg/L	8.35E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	1.15E+00	NA	NA			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	6.40E-03	0.00E+00	6.40E-02	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.47E-04	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.20E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.16E-06	2.02E-07	1.40E-06	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	mg/L	8.12E+00	mg/kg	7.04E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	6.43E-02	6.67E-02	6.67E-02	8.71E-02	8.71E-02	0.00E+00	0.00E+00	1.20E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.28E-03	5.73E-04	5.05E-03	7.74E+01	6.53E-05	1.07E+02	4.72E-05	0.00%	0.01%
Nitrate	4.79E-01	mg/L	9.50E-02	mg/kg	6.12E-01	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	7.68E-03	0.00E+00	1.04E-04	3.18E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.63E-04	6.34E-05	3.27E-01	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	5.55E-02	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02								8.90E-04	0.00E+00	0.00E+00	3.69E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.78E-02	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	3.21E-03	mg/kg	1.00E+00			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	5.44E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.50E-05	2.63E-06	1.82E-05	1.07E+02	1.71E-07	3.20E+02	5.69E-08	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	2.24E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.81E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E-06	1.84E-07	1.27E-06	6.73E+00	1.89E-07	6.73E+01	1.89E-08	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E+00	0.00E+00	6.73E+01	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	9.65E-02	mg/kg	1.00E+00			3.00E-01	NA	2.91E+01	2.91E+01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	1.64E-05	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	5.72E-05	9.99E-06	8.36E-05	6.50E+01	1.29E-06	1.30E+02	6.43E-07	0.00%	0.00%
Selenium	0.00E+00	mg/L	7.51E-01	mg/kg	5.98E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.07E+00	4.92E-01	4.81E-01	4.81E-01	1.51E-01	1.51E-01	0.00E+00	0.00E+00	1.02E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.84E-04	8.45E-05	6.70E-04	4.40E-01	1.52E-03	1.50E+00	4.47E-04	0.01%	0.06%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E+00	0.00E+00	5.44E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.45E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	4.16E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.45E-02	2.54E-03	2.12E-02	NA	NA	NA	NA	NA	NA
Sulfate	5.14E+00	mg/L	1.39E+01	mg/kg	4.14E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	8.24E-02	0.00E+00	7.04E-03	3.41E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.46E-02	4.29E-03	3.53E+00	NA	NA	NA	NA	NA	NA
Thallium	0.00E+00	mg/L	6.14E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00							0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.50E-01	0.00E+00	1.05E+00	0.00E+00	0.00%	0.00%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Vanadium	2.64E-02	mg/L	0.00E+00	mg/kg	1.89E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	4.23E-04	0.00E+00	3.21E-03	1.75E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.56E-04	9.70E-05	2.18E-02	1.14E+01	1.91E-03	3.42E+01	6.38E-04	0.01%	0.08%
Zinc	0.00E+00	mg/L	3.22E+01	mg/kg	4.92E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	6.23E+00	1.05E+00	8.74E-01	8.74E-01	1.84E-01	1.84E-01	0.00E+00	0.00E+00	8.36E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.85E-02	8.47E-03	6.53E-02	1.45E+01	4.51E-03	1.31E+02	4.99E-04	0.02%	0.06%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	2.0E+01	7.8E-01	99.53%	97.57%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	6.3E-07	1.3E-07	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	1.5E-03	1.5E-04	0.01%	0.02%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	2.2E-04	2.9E-05	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	2.5E-04	2.5E-05	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\,x\,Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.26	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0.63	unitless
Bird diet fraction =	0.11	unitless
Soil ingestion rate =	0.000678	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.0339	kg/d
Body weight =	1.126	kg
Home range =	1722	acres
Water intake rate =	0.064	L/d
Site Area =	486	acres
Area Use Factor (AUF) =	0.28223	unitless
Exposure Duration (ED) =	1	unitless

Table E-183
Tier 1 COPCs
EEQs and Hazard Indices for the Deer Mouse at LHAAP
Waste Sub-Area/Harrison Bayou Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							--Unitless--									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	8.46E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.57E-02	0.00E+00	0.00E+00	5.12E+00	0.00E+00	3.51E+00	0.00E+00	0.00E+00	0.00E+00	8.65E+00	2.68E+00	3.23E+00	1.33E+01	6.50E-01	0.19%	0.06%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-01	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.41E-04	0.00E+00	0.00E+00	1.45E-01	0.00E+00	5.88E-02	0.00E+00	0.00E+00	0.00E+00	2.04E-01	1.13E-01	1.81E+00	2.64E-01	7.74E-01	0.11%	0.07%
2,3,7,8-TCDD TEQ	9.44E-09	mg/L	1.41E-05	mg/kg	7.33E-05	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	2.83E-09	0.00E+00	1.36E-07	0.00E+00	0.00E+00	7.55E-05	0.00E+00	1.54E-08	0.00E+00	0.00E+00	0.00E+00	7.57E-05	1.00E-06	7.57E+01	1.00E-05	7.57E+00	4.43%	0.71%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	4.91E+02	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	9.11E-01	0.00E+00	0.00E+00	3.04E+02	0.00E+00	7.28E+00	0.00E+00	0.00E+00	0.00E+00	3.12E+02	2.00E-01	1.56E+03	3.00E-01	1.04E+03	91.23%	98.06%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	1.23E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.28E-03	0.00E+00	0.00E+00	7.66E-01	0.00E+00	1.58E-01	0.00E+00	0.00E+00	0.00E+00	9.26E-01	2.00E-01	4.63E+00	1.50E+00	6.17E-01	0.27%	0.06%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	2.40E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.46E-03	0.00E+00	0.00E+00	1.50E+00	0.00E+00	2.64E-01	0.00E+00	0.00E+00	0.00E+00	1.77E+00	2.00E-01	8.83E+00	6.00E-01	2.94E+00	0.52%	0.28%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	6.15E-04	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.14E-06	0.00E+00	0.00E+00	4.43E-04	0.00E+00	2.28E-06	0.00E+00	0.00E+00	0.00E+00	4.46E-04	8.00E-01	5.58E-04	4.00E+00	1.12E-04	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	2.06E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	3.82E-06	0.00E+00	0.00E+00	1.49E-03	0.00E+00	5.92E-05	0.00E+00	0.00E+00	0.00E+00	1.55E-03	8.00E-01	1.94E-03	4.00E+00	3.88E-04	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.85E-04	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	0.00E+00	5.29E-07	0.00E+00	0.00E+00	2.13E-04	0.00E+00	1.06E-06	0.00E+00	0.00E+00	0.00E+00	2.14E-04	8.00E-01	2.68E-04	4.00E+00	5.36E-05	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.90E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	5.38E-07	0.00E+00	0.00E+00	2.12E-04	0.00E+00	5.42E-07	0.00E+00	0.00E+00	0.00E+00	2.13E-04	4.58E+00	4.65E-05	9.16E+00	2.32E-05	0.00%	0.00%
Aluminum	2.03E+01	mg/L	1.03E+04	mg/kg	9.02E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	6.10E+00	0.00E+00	1.67E+01	0.00E+00	0.00E+00	4.94E+01	0.00E+00	9.62E-01	0.00E+00	0.00E+00	0.00E+00	7.32E+01	1.93E+00	3.79E+01	1.93E+01	3.79E+00	2.22%	0.36%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.57E+00	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	4.76E-03	0.00E+00	0.00E+00	1.36E-01	0.00E+00	8.33E-03	0.00E+00	0.00E+00	0.00E+00	1.49E-01	1.25E-01	1.19E+00	1.25E+00	1.19E-01	0.07%	0.01%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.34E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	6.20E-06	0.00E+00	0.00E+00	2.45E-03	0.00E+00	2.53E-05	0.00E+00	0.00E+00	0.00E+00	2.48E-03	6.85E-02	3.62E-02	6.85E-01	3.62E-03	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.80E-01	0.00E+00	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	5.97E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	0.00E+00	1.11E-05	0.00E+00	0.00E+00	4.49E-03	0.00E+00	2.45E-06	0.00E+00	0.00E+00	0.00E+00	4.50E-03	6.80E-02	6.62E-02	6.80E-01	6.62E-03	0.00%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	2.66E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	4.93E-06	0.00E+00	0.00E+00	2.10E-03	0.00E+00	5.60E-07	0.00E+00	0.00E+00	0.00E+00	2.11E-03	6.80E-02	3.10E-02	6.80E-01	3.10E-03	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.80E-01	0.00E+00	0.00%	0.00%
Barium	0.00E+00	mg/L	2.86E+02	mg/kg	1.01E+03	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	0.00E+00	1.87E+00	0.00E+00	0.00E+00	7.50E+00	0.00E+00	4.31E+01	0.00E+00	0.00E+00	0.00E+00	5.25E+01	5.10E+00	1.03E+01	1.98E+01	2.65E+00	0.60%	0.25%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.82E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	mg/L	1.83E-01	mg/kg	5.20E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.25E+01	1.33E+00	8.31E-01	8.31E-01	9.22E-01	9.22E-01	0.00E+00	0.00E+00	9.64E-04	0.00E+00	0.00E+00	5.43E-01	0.00E+00	2.00E-02	0.00E+00	0.00E+00	0.00E+00	5.64E-01	1.00E+00	5.64E-01	1.00E+01	5.64E-02	0.03%	0.01%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Chromium	1.27E-02	mg/L	0.00E+00	mg/kg	1.61E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	3.80E-03	0.00E+00	2.98E-02	0.00E+00	0.00E+00	2.35E+00	0.00E+00	3.57E-01	0.00E+00	0.00E+00	0.00E+00	2.75E+00	3.28E+00	8.37E-01	1.31E+01	2.09E-01	0.05%	0.02%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Copper	1.69E-02	mg/L	7.78E+00	mg/kg	1.37E+01	mg/kg	1.00E+00	5.92E+03	5.25E+00	8.28E-01	5.59E-01	3.96E-01	3.96E-01	1.49E-01	1.49E-01	5.07E-03	0.00E+00	2.54E-02	0.00E+00	0.00E+00	5.26E-01	0.00E+00	2.51E-01	0.00E+00	0.00E+00	0.00E+00	8.08E-01	1.17E+01	6.90E-02	1.51E+01	5.33E-02	0.00%	0.01%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-02	0.00E+00	2.00E-01	0.00E+00	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	4.39E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	8.13E-07	0.00E+00	0.00E+00	3.10E-04	0.00E+00	7.77E-07	0.00E+00	0.00E+00	0.00E+00	3.12E-04	9.20E-02	3.39E-03	9.20E-01	3.39E-04	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.10E-01	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.89E-04	0.00E+00	0.00E+00	1.51E-01	0.00E+00	1.83E-04	0.00E+00	0.00E+00	0.00E+00	1.51E-01	8.00E-02	1.89E+00	2.90E-01	5.22E-01	0.11%	0.05%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.64E-03	0.00E+00	0.00E+00	8.42E-01	0.00E+00	5.54E-01	0.00E+00	0.00E+00	0.00E+00	1.40E+00	1.00E+00	1.40E+00	5.00E+00	2.80E-01	0.08%	0.03%
Iron	2.91E+01	mg/L	0.00E+00	mg/kg	1.28E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	8.73E+00	0.00E+00	2.37E+01	0.00E+00	0.00E+00	4.63E+01	0.00E+00	2.37E+00	0.00E+00	0.00E+00	0.00E+00	8.11E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	7.24E-03	mg/L	0.00E+00	mg/kg	7.44E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	3.57E-01	NA	3.97E-02	3.97E-02	1.33E-02	1.33E-02	2.17E-03	0.00E+00	1.38E-01	0.00E+00	0.00E+00	1.23E+00	NA	1.37E-01	0.00E+00	0.00E+00	0.00E+00	1.51E+00	8.00E+00	1.89E-01	8.00E+01	1.89E-02	0.01%	0.00%
Manganese	9.37E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+03	2.10E+00	NA	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	2.81E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.81E-01	8.80E+01	3.19E-03	2.84E+02	9.90E-04	0.00%	0.00%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E-01	mg/kg	1.00E+00		2.87E+00	4.75E+00	NA	1.02E+00	1.02E+00	1.03E-01	1.03E-01	0.00E+00	0.00E+00	2.04E-04	0.00E+00	0.00E+00	2.42E-02	NA	5.17E-03	0.00E+00	0.00E+00	0.00E+00	2.96E-02	1.32E+01	2.24E-03	3.96E+01	7.46E-04	0.00%	0.00%
Mercury (methyl)	0.00E+00	mg/L	8.29E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.16E+00	NA	NA			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	3.20E-02	0.00E+00	1.60E-01	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.52E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	6.53E-07	0.00E+00	0.00E+00	2.65E-04	0.00E+00	5.61E-07	0.00E+00	0.00E+00	0.00E+00	2.66E-04	7.00E-02	3.80E-03	7.00E-01	3.80E-04	0.00%	0.00%
Nickel	0.00E+00	mg/L	1.10E+01	mg/kg	7.49E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	5.96E-02	6.57E-02	6.57E-02	1.01E-01	1.01E-01	0.00E+00	0.00E+00	1.39E-02	0.00E+00	0.00E+00	1.64E+00	0.00E+00	2.28E-02	0.00E+00	0.00E+00	0.00E+00	1.68E+00	4.00E+01	4.20E-02	8.00E+01	2.10E-02	0.00%	0.00%
Nitrate	7.46E-01	mg/L	7.48E-01	mg/kg	1.08E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	2.24E-01	0.00E+00	1.99E-03	0.00E+00	0.00E+00	5.68E-02	0.00E+00	1.74E-02	0.00E+00	0.00E+00	0.00E+00	3.00E-01	5.07E+02	5.92E-04	1.13E+03	2.65E-04	0.00%	0.00%
Nitrate/Nitrite	5.84E+01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03								1.75E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.75E+01	5.07E+02	3.46E-02	1.13E+03	1.55E-02	0.00%	0.00%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	3.51E-03	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	6.51E-06	0.00E+00	0.00E+00	2.35E-03	0.00E+00	3.07E-05	0.00E+00	0.00E+00	0.00E+00	2.38E-03	2.10E+00	1.14E-03	6.30E+00	3.79E-04	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	2.98E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	5.52E-07	0.00E+00	0.00E+00	2.10E-04	0.00E+00	4.62E-07	0.00E+00	0.00E+00	0.00E+00	2.11E-04	2.40E-01	8.78E-04	2.40E+00	8.78E-05	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	1.32E-01	mg/kg	1.00E+00			1.14E+00	NA	2.56E+01	2.56E+01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	2.45E-04	0.00E+00	0.00E+00	6.98E-03	NA	1.57E-01	0.00E+00	0.00E+00	0.00E+00	1.64E-01	8.50E+00	1.93E-02	2.55E+01	6.43E-03	0.00%	0.00%
Selenium	4.63E-03	mg/L	9.08E-01	mg/kg	6.76E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.03E+00	5.02E-01	4.87E-01	4.87E-01	1.95E-01	1.95E-01	1.39E-03	0.00E+00	1.25E-03	0.00E+00	0.00E+00	3.23E-02	0.00E+00	1.53E-02	0.00E+00	0.00E+00	0.00E+00	5.02E-02	2.00E-01	2.51E-01	3.30E-01	1.52E-01	0.01%	0.01%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	3.28E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	6.08E-02	0.00E+00	0.00E+00	4.22E-01	0.00E+00	5.32E-01	0.00E+00	0.00E+00	0.00E+00	1.02E+00	2.63E+02	3.86E-03	7.89E+02	1.29E-03	0.00%	0.00%
Sulfate	5.76E+01	mg/L	7.51E+01	mg/kg	1.04E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	1.73E+01	0.00E+00	1.93E-01	0.00E+00	0.00E+00	5.49E+00	0.00E+00	1.69E+00	0.00E+00	0.00E+00	0.00E+00	2.47E+01	NA	NA	NA	NA	NA	NA
Thallium	7.55E-04	mg/L	6.00E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00							2.27E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.27E-04	7.40E-03	3.06E-02	7.40E-02	3.06E-03	0.00%	0.00%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Vanadium	6.18E-02	mg/L	0.00E+00	mg/kg	2.15E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	1.85E-02	0.00E+00	3.98E-02	0.00E+00	0.00E+00	8.75E-02	0.00E+00	3.98E-03	0.00E+00	0.00E+00	0.00E+00	1.50E-01	2.10E-01	7.14E-01	2.10E+00	7.14E-02	0.04%	0.01%
Zinc	0.00E+00	mg/L	3.58E+01	mg/kg	6.24E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.31E+00	1.01E+00	7.87E-01	7.87E-01	4.51E-01	4.51E-01	0.00E+00	0.00E+00	1.16E-01	0.00E+00	0.00E+00	1.54E+01	0.00E+00	2.28E+00	0.00E+00	0.00E+00	0.00E+00	1.78E+01	1.60E+02	1.11E-01	3.20E+02	5.55E-02	0.01%	0.01%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	1.6E+03	1.0E+03	92.02%	98.39%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	4.6E-05	2.3E-05	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	2.8E-03	5.5E-04	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.3E-01	1.3E-02	0.01%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	3.4E-03	3.4E-04	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\,x\,Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0.5	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0.5	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	4.08E-05	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.00204	kg/d
Body weight =	0.022	kg
Home range =	0.034595	acres
Water intake rate =	0.0066	L/d
Site Area =	486	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-184
Tier 2 COPCs
EEQs and Hazard Indices for the Deer Mouse at LHAAP
Waste Sub-Area/Harrison Bayou Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
							-----Unitless-----								
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	5.16E+00	mg/kg	#######			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.49E-01	mg/kg	#######			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01
2,3,7,8-TCDD TEQ	8.00E-09	mg/L	4.00E-06	mg/kg	3.16E-05	mg/kg	#######	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	2.47E+02	mg/kg	#######			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	5.56E-01	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	1.24E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	4.55E-04	mg/kg	#######		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.48E-03	mg/kg	#######		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.98E-04	mg/kg	#######		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.37E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Aluminum	1.12E+01	mg/L	7.50E+03	mg/kg	6.95E+03	mg/kg	#######	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.06E+00	mg/kg	#######			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.22E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.21E-03	mg/kg	#######		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.94E-03	mg/kg	#######			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01
Barium	0.00E+00	mg/L	2.32E+02	mg/kg	5.33E+02	mg/kg	#######	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.33E-01	mg/kg	0.00E+00	mg/kg	#######	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01
Cadmium	0.00E+00	mg/L	1.83E-01	mg/kg	4.73E-01	mg/kg	#######	1.15E+03	6.00E-01	2.35E+01	1.33E+00	8.67E-01	8.67E-01	6.72E-01	6.72E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Chromium	9.95E-03	mg/L	0.00E+00	mg/kg	1.46E+01	mg/kg	#######	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Copper	1.19E-02	mg/L	6.82E+00	mg/kg	1.09E+01	mg/kg	#######	1.11E+03	1.56E+00	9.82E-01	6.06E-01	4.54E-01	4.54E-01	8.97E-02	8.97E-02
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.17E-04	mg/kg	#######			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.52E-01	mg/kg	#######			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	1.03E+00	mg/kg	#######			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01
Iron	1.61E+01	mg/L	0.00E+00	mg/kg	1.12E+04	mg/kg	#######	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.67E+00		1.39E+01	1.39E+01	1.39E+01		
Lead	5.66E-03	mg/L	0.00E+00	mg/kg	4.77E+01	mg/kg	#######	4.48E+02	7.10E-02	3.89E-01	NA	4.83E-02	4.83E-02	1.16E-02	1.16E-02
Manganese	6.92E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	2.50E+02	4.20E-01	NA	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	9.02E-02	mg/kg	#######		1.14E+00	5.42E+00	NA	1.11E+00	1.11E+00	9.15E-02	9.15E-02
Mercury (methyl)	0.00E+00	mg/L	6.13E-02	mg/kg	0.00E+00	mg/kg	#######		1.14E+00	NA	1.33E+00	NA	NA		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.47E-04	mg/kg	#######			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01
Nickel	0.00E+00	mg/L	9.70E+00	mg/kg	7.04E+00	mg/kg	#######		4.86E-01	1.06E+00	6.15E-02	6.67E-02	6.67E-02	8.71E-02	8.71E-02
Nitrate	4.32E-01	mg/L	4.60E-01	mg/kg	6.12E-01	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Nitrate/Nitrite	2.93E+01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	3.01E+02							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	3.21E-03	mg/kg	#######			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	2.24E-04	mg/kg	#######			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	9.65E-02	mg/kg	#######			3.00E-01	NA	2.91E+01	2.91E+01	1.11E-01	1.11E-01
Selenium	3.90E-03	mg/L	7.65E-01	mg/kg	5.98E-01	mg/kg	#######	2.05E+02	4.50E+00	1.07E+00	4.93E-01	4.81E-01	4.81E-01	1.51E-01	1.51E-01
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.50E+00		1.40E-02	1.40E-02	1.40E-02		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.45E+01	mg/kg	#######		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Sulfate	4.15E+01	mg/L	5.13E+01	mg/kg	4.14E+01	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Thallium	5.86E-04	mg/L	4.92E-01	mg/kg	0.00E+00	mg/kg	#######	7.50E+01	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Vanadium	4.29E-02	mg/L	0.00E+00	mg/kg	1.89E+01	mg/kg	#######	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03
Zinc	0.00E+00	mg/L	3.15E+01	mg/kg	4.92E+01	mg/kg	#######	2.91E+03	1.94E+00	6.23E+00	1.06E+00	8.74E-01	8.74E-01	1.84E-01	1.84E-01

Chemical	EED Surface Water (mg/kg-d)	EED Sediment (mg/kg-d)	EED Soil (mg/kg-d)	EED Fish (mg/kg-d)	EED Aq. Invert. (mg/kg-d)	EED Terr. Invert. (mg/kg-d)	EED Aq. Plants (mg/kg-d)	EED Terr. Plants (mg/kg-d)	EED Plant Roots (mg/kg-d)	EED Mammals (mg/kg-d)	EED Birds (mg/kg-d)	Total EED (mg/kg-d)	NOAEL (mg/kg-d)	EEQ N	LOAEL (mg/kg-d)	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	9.56E-03	0.00E+00	0.00E+00	1.80E+00	0.00E+00	1.34E+00	0.00E+00	0.00E+00	0.00E+00	3.15E+00	2.68E+00	1.18E+00	1.33E+01	2.37E-01	0.24%	0.08%
1,3-Dinitrobenzene	0.00E+00	0.00E+00	2.77E-04	0.00E+00	0.00E+00	5.25E-02	0.00E+00	3.06E-02	0.00E+00	0.00E+00	0.00E+00	8.34E-02	1.13E-01	7.38E-01	2.64E-01	3.16E-01	0.15%	0.10%
2,3,7,8-TCDD TEQ	2.40E-09	0.00E+00	5.87E-08	0.00E+00	0.00E+00	1.62E-05	0.00E+00	5.68E-09	0.00E+00	0.00E+00	0.00E+00	1.62E-05	1.00E-06	1.62E+01	1.00E-05	1.62E+00	3.28%	0.53%
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	4.59E-01	0.00E+00	0.00E+00	8.81E+01	0.00E+00	1.83E+00	0.00E+00	0.00E+00	0.00E+00	9.04E+01	2.00E-01	4.52E+02	3.00E-01	3.01E+02	91.31%	98.04%
2,4-Dinitrotoluene	0.00E+00	0.00E+00	1.03E-03	0.00E+00	0.00E+00	2.00E-01	0.00E+00	5.49E-02	0.00E+00	0.00E+00	0.00E+00	2.56E-01	2.00E-01	1.28E+00	1.50E+00	1.70E-01	0.26%	0.06%
2,6-Dinitrotoluene	0.00E+00	0.00E+00	2.31E-03	0.00E+00	0.00E+00	4.47E-01	0.00E+00	1.23E-01	0.00E+00	0.00E+00	0.00E+00	5.72E-01	2.00E-01	2.86E+00	6.00E-01	9.53E-01	0.58%	0.31%
4,4'-DDD	0.00E+00	0.00E+00	8.45E-07	0.00E+00	0.00E+00	1.89E-04	0.00E+00	5.91E-07	0.00E+00	0.00E+00	0.00E+00	1.90E-04	8.00E-01	2.38E-04	4.00E+00	4.76E-05	0.00%	0.00%
4,4'-DDE	0.00E+00	0.00E+00	2.74E-06	0.00E+00	0.00E+00	6.16E-04	0.00E+00	9.31E-06	0.00E+00	0.00E+00	0.00E+00	6.28E-04	8.00E-01	7.85E-04	4.00E+00	1.57E-04	0.00%	0.00%
4,4'-DDT	0.00E+00	0.00E+00	3.68E-07	0.00E+00	0.00E+00	8.53E-05	0.00E+00	2.58E-07	0.00E+00	0.00E+00	0.00E+00	8.60E-05	8.00E-01	1.07E-04	4.00E+00	2.15E-05	0.00%	0.00%
Aldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
alpha-Chlordane	0.00E+00	0.00E+00	4.39E-07	0.00E+00	0.00E+00	9.98E-05	0.00E+00	1.02E-07	0.00E+00	0.00E+00	0.00E+00	1.00E-04	4.58E+00	2.19E-05	9.16E+00	1.10E-05	0.00%	0.00%
Aluminum	3.37E+00	0.00E+00	1.29E+01	0.00E+00	0.00E+00	1.39E+01	0.00E+00	4.84E-01	0.00E+00	0.00E+00	0.00E+00	3.06E+01	1.93E+00	1.59E+01	1.93E+01	1.59E+00	3.20%	0.52%
Antimony	0.00E+00	0.00E+00	3.82E-03	0.00E+00	0.00E+00	2.87E-02	0.00E+00	3.54E-03	0.00E+00	0.00E+00	0.00E+00	3.60E-02	1.25E-01	2.88E-01	1.25E+00	2.88E-02	0.06%	0.01%
Aroclor 1242	0.00E+00	0.00E+00	4.12E-06	0.00E+00	0.00E+00	9.39E-04	0.00E+00	8.64E-07	0.00E+00	0.00E+00	0.00E+00	9.44E-04	6.85E-02	1.38E-02	6.85E-01	1.38E-03	0.00%	0.00%
Aroclor 1248	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.80E-01	0.00E+00	0.00%	0.00%
Aroclor 1254	0.00E+00	0.00E+00	7.81E-06	0.00E+00	0.00E+00	1.83E-03	0.00E+00	6.98E-07	0.00E+00	0.00E+00	0.00E+00	1.83E-03	6.80E-02	2.70E-02	6.80E-01	2.70E-03	0.01%	0.00%
Aroclor 1260	0.00E+00	0.00E+00	3.60E-06	0.00E+00	0.00E+00	8.84E-04	0.00E+00	5.78E-08	0.00E+00	0.00E+00	0.00E+00	8.87E-04	6.80E-02	1.30E-02	6.80E-01	1.30E-03	0.00%	0.00%
Aroclor 1268	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.80E-01	0.00E+00	0.00%	0.00%
Barium	0.00E+00	0.00E+00	9.89E-01	0.00E+00	0.00E+00	2.25E+00	0.00E+00	3.86E+00	0.00E+00	0.00E+00	0.00E+00	7.09E+00	5.10E+00	1.39E+00	1.98E+01	3.58E-01	0.28%	0.12%
Benzoic Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	0.00E+00	8.76E-04	0.00E+00	0.00E+00	5.15E-01	0.00E+00	1.90E-02	0.00E+00	0.00E+00	0.00E+00	5.35E-01	1.00E+00	5.35E-01	1.00E+01	5.35E-02	0.11%	0.02%
Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Chromium	2.98E-03	0.00E+00	2.71E-02	0.00E+00	0.00E+00	2.08E-01	0.00E+00	2.78E-02	0.00E+00	0.00E+00	0.00E+00	2.65E-01	3.28E+00	8.09E-02	1.31E+01	2.02E-02	0.02%	0.01%
cis-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Copper	3.56E-03	0.00E+00	2.03E-02	0.00E+00	0.00E+00	4.98E-01	0.00E+00	2.30E-01	0.00E+00	0.00E+00	0.00E+00	7.52E-01	1.17E+01	6.43E-02	1.51E+01	4.97E-02	0.01%	0.02%
Dieldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-02	0.00E+00	2.00E-01	0.00E+00	0.00%	0.00%
Endrin	0.00E+00	0.00E+00	5.88E-07	0.00E+00	0.00E+00	1.29E-04	0.00E+00	4.03E-07	0.00E+00	0.00E+00	0.00E+00	1.30E-04	9.20E-02	1.42E-03	9.20E-01	1.42E-04	0.00%	0.00%
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	0.00E+00	2.82E-04	0.00E+00	0.00E+00	6.31E-02	0.00E+00	1.12E-04	0.00E+00	0.00E+00	0.00E+00	6.35E-02	8.00E-02	7.94E-01	2.90E-01	2.19E-01	0.16%	0.07%
HMX	0.00E+00	0.00E+00	1.91E-03	0.00E+00	0.00E+00	3.52E-01	0.00E+00	4.01E-01	0.00E+00	0.00E+00	0.00E+00	7.55E-01	1.00E+00	7.55E-01	5.00E+00	1.51E-01	0.15%	0.05%
Iron	4.84E+00	0.00E+00	2.08E+01	0.00E+00	0.00E+00	1.87E+01	0.00E+00	2.08E+00	0.00E+00	0.00E+00	0.00E+00	4.63E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	1.70E-03	0.00E+00	8.84E-02	0.00E+00	0.00E+00	8.60E-01	NA	1.07E-01	0.00E+00	0.00E+00	0.00E+00	1.06E+00	8.00E+00	1.32E-01	8.00E+01	1.32E-02	0.03%	0.00%
Manganese	2.07E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.07E-01	8.80E+01	2.36E-03	2.84E+02	7.31E-04	0.00%	0.00%
Mercury (inorganic)	0.00E+00	0.00E+00	1.67E-04	0.00E+00	0.00E+00	2.27E-02	NA	4.65E-03	0.00E+00	0.00E+00	0.00E+00	2.75E-02	1.32E+01	2.08E-03	3.96E+01	6.94E-04	0.00%	0.00%
Mercury (methyl)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	3.20E-02	0.00E+00	1.60E-01	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	0.00E+00	4.58E-07	0.00E+00	0.00E+00	1.07E-04	0.00E+00	3.94E-08	0.00E+00	0.00E+00	0.00E+00	1.08E-04	7.00E-02	1.54E-03	7.00E-01	1.54E-04	0.00%	0.00%
Nickel	0.00E+00	0.00E+00	1.31E-02	0.00E+00	0.00E+00	3.46E-01	0.00E+00	2.18E-02	0.00E+00	0.00E+00	0.00E+00	3.81E-01	4.00E+01	9.52E-03	8.00E+01	4.76E-03	0.00%	0.00%
Nitrate	1.30E-01	0.00E+00	1.14E-03	0.00E+00	0.00E+00	8.52E-03	0.00E+00	5.96E-03	0.00E+00	0.00E+00	0.00E+00	1.45E-01	5.07E+02	2.86E-04	1.13E+03	1.28E-04	0.00%	0.00%
Nitrate/Nitrite	8.79E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.79E+00	5.07E+02	1.73E-02	1.13E+03	7.77E-03	0.00%	0.00%
Oxychlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	0.00E+00	5.94E-06	0.00E+00	0.00E+00	1.24E-03	0.00E+00	2.46E-05	0.00E+00	0.00E+00	0.00E+00	1.27E-03	2.10E+00	6.03E-04	6.30E+00	2.01E-04	0.00%	0.00%
Pentachloroanisole	0.00E+00	0.00E+00	4.16E-07	0.00E+00	0.00E+00	9.11E-05	0.00E+00	2.85E-07	0.00E+00	0.00E+00	0.00E+00	9.18E-05	2.40E-01	3.82E-04	2.40E+00	3.82E-05	0.00%	0.00%
Pentachlorophenol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	0.00E+00	1.79E-04	0.00E+00	0.00E+00	1.34E-03	NA	1.30E-01	0.00E+00	0.00E+00	0.00E+00	1.32E-01	8.50E+00	1.55E-02	2.55E+01	5.17E-03	0.00%	0.00%
Selenium	1.17E-03	0.00E+00	1.11E-03	0.00E+00	0.00E+00	2.96E-02	0.00E+00	1.34E-02	0.00E+00	0.00E+00	0.00E+00	4.52E-02	2.00E-01	2.26E-01	3.30E-01	1.37E-01	0.05%	0.04%
Silver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	0.00E+00	4.54E-02	0.00E+00	0.00E+00	9.88E-02	0.00E+00	2.39E-01	0.00E+00	0.00E+00	0.00E+00	3.83E-01	2.63E+02	1.46E-03	7.89E+02	4.85E-04	0.00%	0.00%
Sulfate	1.24E+01	0.00E+00	7.68E-02	0.00E+00	0.00E+00	5.76E-01	0.00E+00	4.03E-01	0.00E+00	0.00E+00	0.00E+00	1.35E+01	NA	NA	NA	NA	NA	NA
Thallium	1.76E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.76E-04	7.40E-03	2.38E-02	7.40E-02	2.38E-03	0.00%	0.00%
trans-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Vanadium	1.29E-02	0.00E+00	3.51E-02	0.00E+00	0.00E+00	3.68E-02	0.00E+00	3.16E-03	0.00E+00	0.00E+00	0.00E+00	8.79E-02	2.10E-01	4.19E-01	2.10E+00	4.19E-02	0.08%	0.01%
Zinc	0.00E+00	0.00E+00	9.13E-02	0.00E+00	0.00E+00	1.42E+01	0.00E+00	1.99E+00	0.00E+00	0.00E+00	0.00E+00	1.63E+01	1.60E+02	1.02E-01	3.20E+02	5.09E-02	0.02%	0.02%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	4.6E+02	3.0E+02	92.14%	98.40%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	2.2E-05	1.1E-05	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	1.1E-03	2.3E-04	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	5.4E-02	5.4E-03	0.01%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	1.4E-03	1.4E-04	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\,x\,Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text tables.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0.5	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0.5	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.0000408	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.00204	kg/d
Body weight =	0.022	kg
Home range =	0.1457916	acres
Water intake rate =	0.0066	L/d
Site Area =	486	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-185
Tier 1 COPCs
EEQs and Hazard Indices for the Raccoon at LHAAP
Waste Sub-Area/Harrison Bayou Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							----Unitless----									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	8.46E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.00E-02	0.00E+00	0.00E+00	8.31E-01	0.00E+00	2.28E+00	0.00E+00	2.45E-02	0.00E+00	3.16E+00	2.68E+00	1.18E+00	1.33E+01	2.37E-01	0.22%	0.11%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-01	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	5.61E-04	0.00E+00	0.00E+00	2.35E-02	0.00E+00	3.82E-02	0.00E+00	6.88E-04	0.00E+00	6.30E-02	1.13E-01	5.57E-01	2.64E-01	2.39E-01	0.10%	0.11%
2,3,7,8-TCDD TEQ	9.44E-09	mg/L	1.41E-05	mg/kg	7.33E-05	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	7.77E-10	3.33E-08	1.73E-07	4.02E-06	2.33E-06	1.23E-05	0.00E+00	1.00E-08	0.00E+00	1.12E-08	0.00E+00	1.88E-05	1.00E-06	1.88E+01	1.00E-05	1.88E+00	3.52%	0.87%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	4.91E+02	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.16E+00	0.00E+00	0.00E+00	4.93E+01	0.00E+00	4.73E+00	0.00E+00	1.42E+00	0.00E+00	5.66E+01	2.00E-01	2.83E+02	3.00E-01	1.89E+02	52.86%	87.11%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	1.23E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.90E-03	0.00E+00	0.00E+00	1.24E-01	0.00E+00	1.03E-01	0.00E+00	3.55E-03	0.00E+00	2.33E-01	2.00E-01	1.17E+00	1.50E+00	1.56E-01	0.22%	0.07%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	2.40E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	5.67E-03	0.00E+00	0.00E+00	2.43E-01	0.00E+00	1.71E-01	0.00E+00	6.95E-03	0.00E+00	4.27E-01	2.00E-01	2.13E+00	6.00E-01	7.12E-01	0.40%	0.33%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	6.15E-04	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.45E-06	0.00E+00	0.00E+00	7.19E-05	0.00E+00	1.48E-06	0.00E+00	1.78E-06	0.00E+00	7.66E-05	8.00E-01	9.57E-05	4.00E+00	1.91E-05	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	2.06E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	4.85E-06	0.00E+00	0.00E+00	2.42E-04	0.00E+00	3.84E-05	0.00E+00	5.13E-06	0.00E+00	2.90E-04	8.00E-01	3.63E-04	4.00E+00	7.25E-05	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.85E-04	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	0.00E+00	6.73E-07	0.00E+00	0.00E+00	3.46E-05	0.00E+00	6.87E-07	0.00E+00	1.19E-06	0.00E+00	3.71E-05	8.00E-01	4.64E-05	4.00E+00	9.28E-06	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.90E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	6.83E-07	0.00E+00	0.00E+00	3.44E-05	0.00E+00	3.52E-07	0.00E+00	8.38E-07	0.00E+00	3.63E-05	4.58E+00	7.92E-06	9.16E+00	3.96E-06	0.00%	0.00%
Aluminum	2.03E+01	mg/L	1.03E+04	mg/kg	9.02E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	1.67E+00	2.42E+01	2.13E+01	2.19E-01	3.48E+02	8.01E+00	0.00E+00	6.25E-01	0.00E+00	1.96E-01	0.00E+00	4.05E+02	1.93E+00	2.10E+02	1.93E+01	2.10E+01	39.16%	9.68%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.57E+00	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	6.05E-03	0.00E+00	0.00E+00	2.20E-02	0.00E+00	5.41E-03	0.00E+00	1.07E-03	0.00E+00	3.45E-02	1.25E-01	2.76E-01	1.25E+00	2.76E-02	0.05%	0.01%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.34E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	7.88E-06	0.00E+00	0.00E+00	3.98E-04	0.00E+00	1.64E-05	0.00E+00	9.66E-06	0.00E+00	4.32E-04	6.85E-02	6.30E-03	6.85E-01	6.30E-04	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.90E-01	0.00E+00	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	5.97E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	0.00E+00	1.41E-05	0.00E+00	0.00E+00	7.29E-04	0.00E+00	1.59E-06	0.00E+00	1.59E-05	0.00E+00	7.60E-04	6.80E-02	1.12E-02	6.90E-01	1.10E-03	0.00%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	2.66E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	6.27E-06	0.00E+00	0.00E+00	3.41E-04	0.00E+00	3.64E-07	0.00E+00	1.28E-05	0.00E+00	3.60E-04	6.80E-02	5.30E-03	6.90E-01	5.22E-04	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.90E-01	0.00E+00	0.00%	0.00%
Barium	0.00E+00	mg/L	2.86E+02	mg/kg	1.01E+03	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	6.76E-01	2.38E+00	0.00E+00	9.70E+00	1.22E+00	0.00E+00	2.80E+01	0.00E+00	8.40E-02	0.00E+00	4.21E+01	5.10E+00	8.25E+00	1.98E+01	2.12E+00	1.54%	0.98%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.82E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	0.00E+00	6.64E-04	0.00E+00	0.00E+00	4.64E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.71E-02	1.83E+01	2.57E-03	1.83E+02	2.57E-04	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	mg/L	1.83E-01	mg/kg	5.20E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.25E+01	1.33E+00	8.31E-01	8.31E-01	9.22E-01	9.22E-01	0.00E+00	4.32E-04	1.23E-03	0.00E+00	1.10E-02	8.81E-02	0.00E+00	1.30E-02	0.00E+00	1.20E-03	0.00E+00	1.15E-01	1.00E+00	1.15E-01	1.00E+01	1.15E-02	0.02%	0.01%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Chromium	1.27E-02	mg/L	0.00E+00	mg/kg	1.61E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	1.04E-03	0.00E+00	3.79E-02	3.18E-02	0.00E+00	3.82E-01	0.00E+00	2.32E-01	0.00E+00	1.34E-02	0.00E+00	6.98E-01	3.28E+00	2.13E-01	1.31E+01	5.31E-02	0.04%	0.02%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Copper	1.69E-02	mg/L	7.78E+00	mg/kg	1.37E+01	mg/kg	1.00E+00	5.92E+03	5.25E+00	8.28E-01	5.59E-01	3.96E-01	3.96E-01	1.49E-01	1.49E-01	1.39E-03	1.83E-02	3.23E-02	2.51E-01	3.07E-01	8.53E-02	0.00E+00	1.63E-01	0.00E+00	5.13E-03	0.00E+00	8.64E-01	1.17E+01	7.38E-02	1.51E+01	5.71E-02	0.01%	0.03%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-02	0.00E+00	2.00E-01	0.00E+00	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	4.39E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	1.03E-06	0.00E+00	0.00E+00	5.04E-05	0.00E+00	5.05E-07	0.00E+00	1.34E-06	0.00E+00	5.33E-05	9.20E-02	5.79E-04	9.20E-01	5.79E-05	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.10E-01	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.94E-04	0.00E+00	0.00E+00	2.45E-02	0.00E+00	1.19E-04	0.00E+00	6.06E-04	0.00E+00	2.57E-02	8.00E-02	3.21E-01	2.90E-01	8.86E-02	0.06%	0.04%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.36E-03	0.00E+00	0.00E+00	1.37E-01	0.00E+00	3.60E-01	0.00E+00	4.12E-03	0.00E+00	5.04E-01	1.00E+00	5.04E-01	5.00E+00	1.01E-01	0.09%	0.05%
Iron	2.91E+01	mg/L	0.00E+00	mg/kg	1.28E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	2.40E+00	0.00E+00	3.02E+01	7.30E+01	0.00E+00	7.51E+00	0.00E+00	1.54E+00	0.00E+00	6.64E-02	0.00E+00	1.15E+02	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	7.24E-03	mg/L	0.00E+00	mg/kg	7.44E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	3.57E-01	NA	3.97E-02	3.97E-02	1.33E-02	1.33E-02	5.96E-04	0.00E+00	1.75E-01	2.73E-02	0.00E+00	2.00E-01	NA	8.89E-02	0.00E+00	2.48E-03	0.00E+00	4.95E-01	8.00E+00	6.18E-02	8.00E+01	6.18E-03	0.01%	0.00%
Manganese	9.37E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+03	2.10E+00	NA	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	7.72E-02	0.00E+00	0.00E+00	4.70E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.78E+00	8.80E+01	5.43E-02	2.84E+02	1.68E-02	0.01%	0.01%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E-01	mg/kg	1.00E+00		2.87E+00	4.75E+00	NA	1.02E+00	1.02E+00	1.03E-01	1.03E-01	0.00E+00	0.00E+00	2.59E-04	0.00E+00	0.00E+00	3.92E-03	NA	3.36E-03	0.00E+00	2.84E-05	0.00E+00	7.57E-03	1.00E+00	7.57E-03	3.00E+00	2.52E-03	0.00%	0.00%
Mercury (methyl)	0.00E+00	mg/L	8.29E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.16E+00	NA	NA			0.00E+00	1.95E-04	0.00E+00	0.00E+00	1.79E-03	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	1.98E-03	1.50E-02	1.32E-01	2.50E-02	7.94E-02	0.02%	0.04%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.52E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	8.30E-07	0.00E+00	0.00E+00	4.30E-05	0.00E+00	3.64E-07	0.00E+00	1.02E-06	0.00E+00	4.52E-05	7.00E-02	6.46E-04	7.00E-01	6.46E-05	0.00%	0.00%
Nickel	0.00E+00	mg/L	1.10E+01	mg/kg	7.49E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	5.96E-02	6.57E-02	6.57E-02	1.01E-01	1.01E-01	0.00E+00	2.59E-02	1.77E-02	0.00E+00	1.92E-01	2.66E-01	0.00E+00	1.48E-02	0.00E+00	1.90E-03	0.00E+00	5.19E-01	4.00E-01	1.30E+00	8.00E+01	6.48E-03	0.00%	0.00%
Nitrate	7.46E-01	mg/L	7.48E-01	mg/kg	1.08E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	6.14E-02	1.76E-03	2.54E-03	2.00E+00	1.18E-02	9.22E-03	0.00E+00	1.13E-02	0.00E+00	4.48E-04	0.00E+00	2.10E+00	5.07E+02	4.13E-03	1.13E+03	1.86E-03	0.00%	0.00%
Nitrate/Nitrite	5.84E+01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03								4.81E+00	0.00E+00	0.00E+00	1.57E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.61E+02	5.07E+02	3.18E-01	1.13E+03	1.43E-01	0.06%	0.07%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	3.51E-03	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	8.28E-06	0.00E+00	0.00E+00	3.81E-04	0.00E+00	1.99E-05	0.00E+00	1.01E-05	0.00E+00	4.19E-04	2.10E+00	2.00E-04	6.30E+00	6.66E-05	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	2.98E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	7.02E-07	0.00E+00	0.00E+00	3.40E-05	0.00E+00	3.00E-07	0.00E+00	8.61E-07	0.00E+00	3.59E-05	2.40E-01	1.50E-04	2.40E+00	1.50E-05	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	1.32E-01	mg/kg	1.00E+00			1.14E+00	NA	2.56E+01	2.56E+01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	3.11E-04	0.00E+00	0.00E+00	1.13E-03	NA	1.02E-01	0.00E+00	5.51E-05	0.00E+00	1.03E-01	8.50E+00	1.21E-02	2.55E+01	4.05E-03	0.00%	0.00%
Selenium	4.63E-03	mg/L	9.08E-01	mg/kg	6.76E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.03E+00	5.02E-01	4.87E-01	4.87E-01	1.95E-01	1.95E-01	3.81E-04	2.14E-03	1.59E-03	2.38E-03	3.07E-02	5.24E-03	0.00E+00	9.91E-03	0.00E+00	3.31E-04	0.00E+00	5.27E-02	2.00E-01	2.64E-01	3.30E-01	1.60E-01	0.05%	0.07%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	3.28E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	7.73E-02	0.00E+00	0.00E+00	6.86E-02	0.00E+00	3.45E-01	0.00E+00	1.37E-02	0.00E+00	5.05E-01	2.63E+02	1.92E-03	7.89E+02	6.40E-04	0.00%	0.00%
Sulfate	5.76E+01	mg/L	7.51E+01	mg/kg	1.04E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	4.74E+00	1.77E-01	2.45E-01	1.54E+02	1.19E+00	8.92E-01	0.00E+00	1.10E+00	0.00E+00	4.33E-02	0.00E+00	1.63E+02	NA	NA	NA	NA	NA	NA
Thallium	7.55E-04	mg/L	6.00E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00							6.22E-05	1.41E-03	0.00E+00	3.01E-02	2.03E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.19E-02	7.40E-03	7.01E+00	7.40E-02	7.01E-01	1.31%	0.32%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Vanadium	6.18E-02	mg/L	0.00E+00	mg/kg	2.15E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	5.09E-03	0.00E+00	5.06E-02	1.66E-01	0.00E+00	1.42E-02	0.00E+00	2.58E-03	0.00E+00	3.19E-04	0.00E+00	2.38E-01	2.10E-01	1.14E+00	2.10E+00	1.14E-01	0.21%	0.05%
Zinc	0.00E+00	mg/L	3.58E+01	mg/kg	6.24E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.31E+00	1.01E+00	7.87E-01	7.87E-01	4.51E-01	4.51E-01	0.00E+00	8.44E-02	1.47E-01	0.00E+00	2.03E+00	2.50E+00	0.00E+00	1.48E+00	0.00E+00	7.06E-02	0.00E+00	6.30E+00	1.60E+02	3.94E-02	3.20E+02	1.97E-02	0.01%	0.01%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	2.9E+02	1.9E+02	53.48%	87.51%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	7.9E-06	4.0E-06	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	5.0E-04	1.0E-04	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	2.3E-02	2.3E-03	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	2.6E-03	2.6E-04	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	5.8E-04	5.8E-05	0.00%	0.00%

Intake Equation:

$$E_j = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi \times Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0.6	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.05	unitless
Aq. Invert diet fraction =	0.15	unitless
Terr. Invert diet fraction =	0.15	unitless
Mammal diet fraction =	0.05	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.01363	kg/d
Sediment ingestion rate =	0.01363	kg/d
Food ingestion rate =	0.29	kg/d
Body weight =	5.78	kg
Home range =	13.09653	acres
Water intake rate =	0.476	L/d
Site Area =	486	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-186
Tier 2 COPCs
EEQs and Hazard Indices for the Raccoon at LHAAP
Waste Sub-Area/Harrison Bayou Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water
									-----Unitless-----							mg/kg-d
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	5.16E+00	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.49E-01	mg/kg	1.00E+00			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00
2,3,7,8-TCDD TEQ	8.00E-09	mg/L	4.00E-06	mg/kg	3.16E-05	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	5.02E-10
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	2.47E+02	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	5.56E-01	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	1.24E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	4.55E-04	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.48E-03	mg/kg	1.00E+00		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.98E-04	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.37E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00
Aluminum	1.12E+01	mg/L	7.50E+03	mg/kg	6.95E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	7.04E-01
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.06E+00	mg/kg	1.00E+00			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.22E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.21E-03	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.94E-03	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00
Barium	0.00E+00	mg/L	2.32E+02	mg/kg	5.33E+02	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.33E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	0.00E+00
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00
Cadmium	0.00E+00	mg/L	1.83E-01	mg/kg	4.73E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	2.35E+01	1.33E+00	8.67E-01	8.67E-01	6.72E-01	6.72E-01	0.00E+00
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00
Chromium	9.95E-03	mg/L	0.00E+00	mg/kg	1.46E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	6.25E-04
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00
Copper	1.19E-02	mg/L	6.82E+00	mg/kg	1.09E+01	mg/kg	1.00E+00	1.11E+03	1.56E+00	9.82E-01	6.06E-01	4.54E-01	4.54E-01	8.97E-02	8.97E-02	7.45E-04
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.17E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.52E-01	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	1.03E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00
Iron	1.61E+01	mg/L	0.00E+00	mg/kg	1.12E+04	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	1.01E+00
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00
Lead	5.66E-03	mg/L	0.00E+00	mg/kg	4.77E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	3.89E-01	NA	4.83E-02	4.83E-02	1.16E-02	1.16E-02	3.55E-04
Manganese	6.92E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.50E+02	4.20E-01	NA	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	4.34E-02
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	9.02E-02	mg/kg	1.00E+00		1.14E+00	5.42E+00	NA	1.11E+00	1.11E+00	9.15E-02	9.15E-02	0.00E+00
Mercury (methyl)	0.00E+00	mg/L	6.13E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	1.33E+00	NA	NA			0.00E+00
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.47E-04	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00
Nickel	0.00E+00	mg/L	9.70E+00	mg/kg	7.04E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	6.15E-02	6.67E-02	6.67E-02	8.71E-02	8.71E-02	0.00E+00
Nitrate	4.32E-01	mg/L	4.60E-01	mg/kg	6.12E-01	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	2.71E-02
Nitrate/Nitrite	2.93E+01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02								1.84E+00
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	3.21E-03	mg/kg	1.00E+00			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	2.24E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	9.65E-02	mg/kg	1.00E+00			3.00E-01	NA	2.91E+01	2.91E+01	1.11E-01	1.11E-01	0.00E+00
Selenium	3.90E-03	mg/L	7.65E-01	mg/kg	5.98E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.07E+00	4.93E-01	4.81E-01	4.81E-01	1.51E-01	1.51E-01	2.45E-04
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.45E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00
Sulfate	4.15E+01	mg/L	5.13E+01	mg/kg	4.14E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	2.60E+00
Thallium	5.86E-04	mg/L	4.92E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00							3.68E-05
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00
Vanadium	4.29E-02	mg/L	0.00E+00	mg/kg	1.89E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	2.69E-03
Zinc	0.00E+00	mg/L	3.15E+01	mg/kg	4.92E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	6.23E+00	1.06E+00	8.74E-01	8.74E-01	1.84E-01	1.84E-01	0.00E+00

Chemical	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	9.27E-03	0.00E+00	0.00E+00	2.23E-01	0.00E+00	6.65E-01	0.00E+00	8.64E-03	0.00E+00	9.06E-01	2.68E+00	3.38E-01	1.33E+01	6.81E-02	0.18%	0.12%
1,3-Dinitrobenzene	0.00E+00	2.68E-04	0.00E+00	0.00E+00	6.49E-03	0.00E+00	1.52E-02	0.00E+00	2.50E-04	0.00E+00	2.22E-02	1.13E-01	1.96E-01	2.64E-01	8.40E-02	0.10%	0.15%
2,3,7,8-TCDD TEQ	7.19E-09	5.69E-08	3.53E-07	1.07E-07	2.00E-06	0.00E+00	2.81E-09	0.00E+00	2.86E-09	0.00E+00	2.53E-06	1.00E-06	2.53E+00	1.00E-05	2.53E-01	1.35%	0.46%
2,4,6-Trinitrotoluene	0.00E+00	4.44E-01	0.00E+00	0.00E+00	1.09E+01	0.00E+00	9.05E-01	0.00E+00	4.14E-01	0.00E+00	1.27E+01	2.00E-01	6.33E+01	3.00E-01	4.22E+01	33.79%	76.26%
2,4-Dinitrotoluene	0.00E+00	1.00E-03	0.00E+00	0.00E+00	2.47E-02	0.00E+00	2.72E-02	0.00E+00	9.32E-04	0.00E+00	5.38E-02	2.00E-01	2.69E-01	1.50E+00	3.59E-02	0.14%	0.06%
2,6-Dinitrotoluene	0.00E+00	2.24E-03	0.00E+00	0.00E+00	5.53E-02	0.00E+00	6.08E-02	0.00E+00	2.08E-03	0.00E+00	1.20E-01	2.00E-01	6.02E-01	6.00E-01	2.01E-01	0.32%	0.36%
4,4'-DDD	0.00E+00	8.19E-07	0.00E+00	0.00E+00	2.34E-05	0.00E+00	2.93E-07	0.00E+00	7.63E-07	0.00E+00	2.53E-05	8.00E-01	3.16E-05	4.00E+00	6.31E-06	0.00%	0.00%
4,4'-DDE	0.00E+00	2.65E-06	0.00E+00	0.00E+00	7.62E-05	0.00E+00	4.61E-06	0.00E+00	2.66E-06	0.00E+00	8.61E-05	8.00E-01	1.08E-04	4.00E+00	2.15E-05	0.00%	0.00%
4,4'-DDT	0.00E+00	3.57E-07	0.00E+00	0.00E+00	1.06E-05	0.00E+00	1.27E-07	0.00E+00	3.37E-07	0.00E+00	1.14E-05	8.00E-01	1.42E-05	4.00E+00	2.85E-06	0.00%	0.00%
Aldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
alpha-Chlordane	0.00E+00	4.26E-07	0.00E+00	0.00E+00	1.23E-05	0.00E+00	5.07E-08	0.00E+00	3.97E-07	0.00E+00	1.32E-05	4.58E+00	2.89E-06	9.16E+00	1.44E-06	0.00%	0.00%
Aluminum	1.35E+01	1.25E+01	9.23E-02	1.94E+02	1.72E+00	0.00E+00	2.39E-01	0.00E+00	8.81E-02	0.00E+00	2.22E+02	1.93E+00	1.15E+02	1.93E+01	1.15E+01	61.48%	20.81%
Antimony	0.00E+00	3.71E-03	0.00E+00	0.00E+00	3.55E-03	0.00E+00	1.75E-03	0.00E+00	4.37E-04	0.00E+00	9.44E-03	1.25E-01	7.55E-02	1.25E+00	7.55E-03	0.04%	0.01%
Aroclor 1242	0.00E+00	3.99E-06	0.00E+00	0.00E+00	1.16E-04	0.00E+00	4.28E-07	0.00E+00	3.72E-06	0.00E+00	1.24E-04	6.85E-02	1.82E-03	6.85E-01	1.82E-04	0.00%	0.00%
Aroclor 1248	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.90E-01	0.00E+00	0.00%	0.00%
Aroclor 1254	0.00E+00	7.57E-06	0.00E+00	0.00E+00	2.26E-04	0.00E+00	3.46E-07	0.00E+00	4.01E-06	0.00E+00	2.38E-04	6.80E-02	3.50E-03	6.90E-01	3.45E-04	0.00%	0.00%
Aroclor 1260	0.00E+00	3.49E-06	0.00E+00	0.00E+00	1.09E-04	0.00E+00	2.86E-08	0.00E+00	6.19E-06	0.00E+00	1.19E-04	6.80E-02	1.75E-03	6.90E-01	1.73E-04	0.00%	0.00%
Aroclor 1268	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.90E-01	0.00E+00	0.00%	0.00%
Barium	4.16E-01	9.58E-01	0.00E+00	5.98E+00	2.78E-01	0.00E+00	1.91E+00	0.00E+00	2.04E-02	0.00E+00	9.56E+00	5.10E+00	1.87E+00	1.98E+01	4.83E-01	1.00%	0.87%
Benzoic Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00	0.00%	0.00%
bis(2-ethylhexyl)phthalate	4.18E-04	0.00E+00	0.00E+00	6.23E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.65E-03	1.83E+01	3.63E-04	1.83E+02	3.63E-05	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	3.29E-04	8.49E-04	0.00E+00	6.30E-04	6.37E-02	0.00E+00	9.40E-03	0.00E+00	6.08E-04	0.00E+00	7.55E-02	1.00E+00	7.55E-02	1.00E+01	7.55E-03	0.04%	0.01%
Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Chromium	0.00E+00	2.63E-02	6.85E-03	0.00E+00	2.57E-02	0.00E+00	1.38E-02	0.00E+00	2.37E-03	0.00E+00	7.56E-02	3.28E+00	2.30E-02	1.31E+01	5.75E-03	0.01%	0.01%
cis-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Copper	1.23E-02	1.97E-02	2.52E-02	6.10E-02	6.16E-02	0.00E+00	1.14E-01	0.00E+00	1.88E-03	0.00E+00	2.96E-01	1.17E+01	2.53E-02	1.51E+01	1.96E-02	0.01%	0.04%
Dieldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-02	0.00E+00	2.00E-01	0.00E+00	0.00%	0.00%
Endrin	0.00E+00	5.70E-07	0.00E+00	0.00E+00	1.60E-05	0.00E+00	1.99E-07	0.00E+00	7.36E-07	0.00E+00	1.75E-05	9.20E-02	1.90E-04	9.20E-01	1.90E-05	0.00%	0.00%
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	2.74E-04	0.00E+00	0.00E+00	7.81E-03	0.00E+00	5.55E-05	0.00E+00	2.55E-04	0.00E+00	8.40E-03	8.00E-02	1.05E-01	2.90E-01	2.89E-02	0.06%	0.05%
HMX	0.00E+00	1.86E-03	0.00E+00	0.00E+00	4.35E-02	0.00E+00	1.99E-01	0.00E+00	1.73E-03	0.00E+00	2.46E-01	1.00E+00	2.46E-01	5.00E+00	4.91E-02	0.13%	0.09%
Iron	0.00E+00	2.01E+01	7.72E+00	0.00E+00	2.31E+00	0.00E+00	1.03E+00	0.00E+00	3.76E-02	0.00E+00	3.22E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	0.00E+00	8.57E-02	4.85E-03	0.00E+00	1.06E-01	NA	5.28E-02	0.00E+00	1.06E-03	0.00E+00	2.51E-01	8.00E+00	3.14E-02	8.00E+01	3.14E-03	0.02%	0.01%
Manganese	0.00E+00	0.00E+00	3.31E-01	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.74E-01	8.80E+01	4.25E-03	2.84E+02	1.32E-03	0.00%	0.00%
Mercury (inorganic)	0.00E+00	1.62E-04	0.00E+00	0.00E+00	2.80E-03	NA	2.30E-03	0.00E+00	1.58E-05	0.00E+00	5.28E-03	1.00E+00	5.28E-03	3.00E+00	1.76E-03	0.00%	0.00%
Mercury (methyl)	1.10E-04	0.00E+00	0.00E+00	3.99E-04	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	5.09E-04	1.50E-02	3.40E-02	2.50E-02	2.04E-02	0.02%	0.04%
Mirex	0.00E+00	4.44E-07	0.00E+00	0.00E+00	1.33E-05	0.00E+00	1.95E-08	0.00E+00	4.14E-07	0.00E+00	1.42E-05	7.00E-02	2.02E-04	7.00E-01	2.02E-05	0.00%	0.00%
Nickel	1.74E-02	1.27E-02	0.00E+00	2.70E-02	4.28E-02	0.00E+00	1.08E-02	0.00E+00	1.17E-03	0.00E+00	1.12E-01	4.00E+01	2.80E-03	8.00E+01	1.40E-03	0.00%	0.00%
Nitrate	8.27E-04	1.10E-03	2.48E-01	1.11E-03	1.05E-03	0.00E+00	2.95E-03	0.00E+00	1.30E-04	0.00E+00	2.83E-01	5.07E+02	5.57E-04	1.13E+03	2.50E-04	0.00%	0.00%
Nitrate/Nitrite	0.00E+00	0.00E+00	1.68E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.87E+01	5.07E+02	3.69E-02	1.13E+03	1.65E-02	0.02%	0.03%
Oxychlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	5.76E-06	0.00E+00	0.00E+00	1.53E-04	0.00E+00	1.22E-05	0.00E+00	5.37E-06	0.00E+00	1.76E-04	2.10E+00	8.39E-05	6.30E+00	2.80E-05	0.00%	0.00%
Pentachloroanisole	0.00E+00	4.03E-07	0.00E+00	0.00E+00	1.13E-05	0.00E+00	1.41E-07	0.00E+00	3.76E-07	0.00E+00	1.22E-05	2.40E-01	5.08E-05	2.40E+00	5.08E-06	0.00%	0.00%
Pentachlorophenol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	1.74E-04	0.00E+00	0.00E+00	1.66E-04	NA	6.45E-02	0.00E+00	2.04E-05	0.00E+00	6.48E-02	8.50E+00	7.63E-03	2.55E+01	2.54E-03	0.00%	0.00%
Selenium	1.38E-03	1.08E-03	1.53E-03	1.97E-02	3.66E-03	0.00E+00	6.61E-03	0.00E+00	1.73E-04	0.00E+00	3.44E-02	2.00E-01	1.72E-01	3.30E-01	1.04E-01	0.09%	0.19%
Silver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	4.40E-02	0.00E+00	0.00E+00	1.22E-02	0.00E+00	1.18E-01	0.00E+00	5.19E-03	0.00E+00	1.80E-01	2.63E+02	6.83E-04	7.89E+02	2.28E-04	0.00%	0.00%
Sulfate	9.22E-02	7.45E-02	2.39E+01	1.24E-01	7.13E-02	0.00E+00	2.00E-01	0.00E+00	8.78E-03	0.00E+00	2.70E+01	NA	NA	NA	NA	NA	NA
Thallium	8.84E-04	0.00E+00	8.40E-05	1.27E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.37E-02	7.40E-03	1.85E+00	7.40E-02	1.85E-01	0.99%	0.33%
trans-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Vanadium	0.00E+00	3.40E-02	2.47E-02	0.00E+00	4.56E-03	0.00E+00	1.56E-03	0.00E+00	1.98E-04	0.00E+00	6.77E-02	2.10E-01	3.22E-01	2.10E+00	3.22E-02	0.17%	0.06%
Zinc	5.67E-02	8.85E-02	0.00E+00	3.50E-01	1.76E+00	0.00E+00	9.87E-01	0.00E+00	1.73E-02	0.00E+00	3.26E+00	1.60E+02	2.04E-02	3.20E+02	1.02E-02	0.01%	0.02%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	6.4E+01	4.2E+01	34.26%	76.68%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	2.9E-06	1.4E-06	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	1.5E-04	3.1E-05	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	7.1E-03	7.0E-04	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	3.6E-04	3.6E-05	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	1.9E-04	1.9E-05	0.00%	0.00%

Intake Equation:

$$E_j = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0.6	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.05	unitless
Aq. Invert diet fraction =	0.15	unitless
Terr. Invert diet fraction =	0.15	unitless
Mammal diet fraction =	0.05	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.01363	kg/d
Sediment ingestion rate =	0.01363	kg/d
Food ingestion rate =	0.29	kg/d
Body weight =	5.78	kg
Home range =	637.5293	acres
Water intake rate =	0.476	L/d
Site Area =	486	acres
Area Use Factor (AUF) =	0.762318	unitless
Exposure Duration (ED) =	1	unitless

Table E-187
Tier 1 COPCs
EEQs and Hazard Indices for the Raccoon-Louisiana Black Bear at LHAAP
Waste Sub-Area/Harrison Bayou Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							-----Unitless-----									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	8.46E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	8.47E-04	0.00E+00	0.00E+00	1.18E-01	0.00E+00	3.25E-01	0.00E+00	3.49E-03	0.00E+00	4.48E-01	2.68E+00	1.67E-01	1.33E+01	3.37E-02	0.23%	0.11%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-01	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.38E-05	0.00E+00	0.00E+00	3.36E-03	0.00E+00	5.44E-03	0.00E+00	9.80E-05	0.00E+00	8.92E-03	1.13E-01	7.89E-02	2.64E-01	3.38E-02	0.11%	0.11%
2,3,7,8-TCDD TEQ	9.44E-09	mg/L	1.41E-05	mg/kg	7.33E-05	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	1.88E-10	1.41E-09	7.34E-09	5.74E-07	3.31E-07	1.75E-06	0.00E+00	1.43E-09	0.00E+00	1.60E-09	0.00E+00	2.66E-06	1.00E-06	2.66E+00	1.00E-05	2.66E-01	3.64%	0.88%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	4.91E+02	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.91E-02	0.00E+00	0.00E+00	7.02E+00	0.00E+00	6.74E-01	0.00E+00	2.02E-01	0.00E+00	7.95E+00	2.00E-01	3.97E+01	3.00E-01	2.65E+01	54.23%	87.68%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	1.23E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.23E-04	0.00E+00	0.00E+00	1.77E-02	0.00E+00	1.46E-02	0.00E+00	5.06E-04	0.00E+00	3.30E-02	2.00E-01	1.65E-01	1.50E+00	2.20E-02	0.23%	0.07%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	2.40E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.41E-04	0.00E+00	0.00E+00	3.46E-02	0.00E+00	2.44E-02	0.00E+00	9.90E-04	0.00E+00	6.03E-02	2.00E-01	3.01E-01	6.00E-01	1.00E-01	0.41%	0.33%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	6.15E-04	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	6.16E-08	0.00E+00	0.00E+00	1.02E-05	0.00E+00	2.11E-07	0.00E+00	2.53E-07	0.00E+00	1.08E-05	8.00E-01	1.35E-05	4.00E+00	2.69E-06	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	2.06E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	2.06E-07	0.00E+00	0.00E+00	3.44E-05	0.00E+00	5.47E-06	0.00E+00	7.31E-07	0.00E+00	4.09E-05	8.00E-01	5.11E-05	4.00E+00	1.02E-05	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.85E-04	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	0.00E+00	2.86E-08	0.00E+00	0.00E+00	4.92E-06	0.00E+00	9.79E-08	0.00E+00	1.70E-07	0.00E+00	5.22E-06	8.00E-01	6.52E-06	4.00E+00	1.30E-06	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.90E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.90E-08	0.00E+00	0.00E+00	4.90E-06	0.00E+00	5.01E-08	0.00E+00	1.19E-07	0.00E+00	5.10E-06	4.58E+00	1.11E-06	9.16E+00	5.57E-07	0.00%	0.00%
Aluminum	2.03E+01	mg/L	1.03E+04	mg/kg	9.02E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	4.04E-01	1.03E+00	9.03E-01	3.12E-02	4.96E+01	1.14E+00	0.00E+00	8.90E-02	0.00E+00	2.79E-02	0.00E+00	5.33E+01	1.93E+00	2.76E+01	1.93E+01	2.76E+00	37.65%	9.13%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.57E+00	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	2.57E-04	0.00E+00	0.00E+00	3.14E-03	0.00E+00	7.71E-04	0.00E+00	1.52E-04	0.00E+00	4.32E-03	1.25E-01	3.45E-02	1.25E+00	3.45E-03	0.05%	0.01%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.34E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.35E-07	0.00E+00	0.00E+00	5.67E-05	0.00E+00	2.34E-06	0.00E+00	1.38E-06	0.00E+00	6.07E-05	6.85E-02	8.87E-04	6.85E-01	8.87E-05	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.90E-01	0.00E+00	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	5.97E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	0.00E+00	5.98E-07	0.00E+00	0.00E+00	1.04E-04	0.00E+00	2.27E-07	0.00E+00	2.27E-06	0.00E+00	1.07E-04	6.80E-02	1.57E-03	6.90E-01	1.55E-04	0.00%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	2.66E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	2.66E-07	0.00E+00	0.00E+00	4.86E-05	0.00E+00	5.18E-08	0.00E+00	1.82E-06	0.00E+00	5.07E-05	6.80E-02	7.46E-04	6.90E-01	7.35E-05	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.90E-01	0.00E+00	0.00%	0.00%
Barium	0.00E+00	mg/L	2.86E+02	mg/kg	1.01E+03	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	2.87E-02	1.01E-01	0.00E+00	1.38E+00	1.73E-01	0.00E+00	3.99E+00	0.00E+00	1.20E-02	0.00E+00	5.69E+00	5.10E+00	1.12E+00	1.98E+01	2.87E-01	1.52%	0.95%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.82E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	0.00E+00	2.82E-05	0.00E+00	0.00E+00	6.61E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.64E-03	1.83E+01	3.62E-04	1.83E+02	3.63E-05	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	mg/L	1.83E-01	mg/kg	5.20E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.25E+01	1.33E+00	8.31E-01	8.31E-01	9.22E-01	9.22E-01	0.00E+00	1.83E-05	5.20E-05	0.00E+00	1.57E-03	1.26E-02	0.00E+00	1.85E-03	0.00E+00	1.71E-04	0.00E+00	1.62E-02	1.00E+00	1.62E-02	1.00E+01	1.62E-03	0.02%	0.01%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Chromium	1.27E-02	mg/L	0.00E+00	mg/kg	1.61E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	2.52E-04	0.00E+00	1.61E-03	4.53E-03	0.00E+00	5.45E-02	0.00E+00	3.31E-02	0.00E+00	1.91E-03	0.00E+00	9.58E-02	3.28E+00	2.92E-02	1.31E+01	7.29E-03	0.04%	0.02%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Copper	1.69E-02	mg/L	7.78E+00	mg/kg	1.37E+01	mg/kg	1.00E+00	5.92E+03	5.25E+00	8.28E-01	5.59E-01	3.96E-01	3.96E-01	1.49E-01	1.49E-01	3.36E-04	7.79E-04	1.37E-03	3.57E-02	4.38E-02	1.22E-02	0.00E+00	2.33E-02	0.00E+00	7.31E-04	0.00E+00	1.18E-01	1.17E+01	1.01E-02	1.51E+01	7.80E-03	0.01%	0.03%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-02	0.00E+00	2.00E-01	0.00E+00	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	4.39E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	4.39E-08	0.00E+00	0.00E+00	7.18E-06	0.00E+00	7.19E-08	0.00E+00	1.91E-07	0.00E+00	7.49E-06	9.20E-02	8.14E-05	9.20E-01	8.14E-06	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.10E-01	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.10E-05	0.00E+00	0.00E+00	3.49E-03	0.00E+00	1.70E-05	0.00E+00	8.63E-05	0.00E+00	3.61E-03	8.00E-02	4.51E-02	2.90E-01	1.25E-02	0.06%	0.04%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.43E-04	0.00E+00	0.00E+00	1.95E-02	0.00E+00	5.13E-02	0.00E+00	5.87E-04	0.00E+00	7.15E-02	1.00E+00	7.15E-02	5.00E+00	1.43E-02	0.10%	0.05%
Iron	2.91E+01	mg/L	0.00E+00	mg/kg	1.28E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	5.79E-01	0.00E+00	1.28E+00	1.04E+01	0.00E+00	1.07E+00	0.00E+00	2.20E-01	0.00E+00	9.46E-03	0.00E+00	1.36E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	7.24E-03	mg/L	0.00E+00	mg/kg	7.44E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	3.57E-01	NA	3.97E-02	3.97E-02	1.33E-02	1.33E-02	1.44E-04	0.00E+00	7.45E-03	3.88E-03	0.00E+00	2.85E-02	NA	1.27E-02	0.00E+00	3.54E-04	0.00E+00	5.30E-02	8.00E+00	6.63E-03	8.00E+01	6.63E-04	0.01%	0.00%
Manganese	9.37E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+03	2.10E+00	NA	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	1.86E-02	0.00E+00	0.00E+00	6.70E-01	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.89E-01	8.80E+01	7.82E-03	2.84E+02	2.42E-03	0.01%	0.01%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E-01	mg/kg	1.00E+00		2.87E+00	4.75E+00	NA	1.02E+00	1.02E+00	1.03E-01	1.03E-01	0.00E+00	0.00E+00	1.10E-05	0.00E+00	0.00E+00	5.59E-04	NA	4.79E-04	0.00E+00	4.04E-06	0.00E+00	1.05E-03	1.00E+00	1.05E-03	3.00E+00	3.51E-04	0.00%	0.00%
Mercury (methyl)	0.00E+00	mg/L	8.29E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.16E+00	NA	NA			0.00E+00	8.30E-06	0.00E+00	0.00E+00	2.55E-04	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	2.63E-04	1.50E-02	1.76E-02	2.50E-02	1.05E-02	0.02%	0.03%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.52E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.52E-08	0.00E+00	0.00E+00	6.13E-06	0.00E+00	5.19E-08	0.00E+00	1.45E-07	0.00E+00	6.36E-06	7.00E-02	9.08E-05	7.00E-01	9.08E-06	0.00%	0.00%
Nickel	0.00E+00	mg/L	1.10E+01	mg/kg	7.49E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	5.96E-02	6.57E-02	6.57E-02	1.01E-01	1.01E-01	0.00E+00	1.10E-03	7.49E-04	0.00E+00	2.73E-02	3.80E-02	0.00E+00	2.11E-03	0.00E+00	2.70E-04	0.00E+00	6.95E-02	4.00E+01	1.74E-03	8.00E+01	8.69E-04	0.00%	0.00%
Nitrate	7.46E-01	mg/L	7.48E-01	mg/kg	1.08E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	1.48E-02	7.49E-05	1.08E-04	2.85E-01	1.69E-03	1.31E-03	0.00E+00	1.61E-03	0.00E+00	6.39E-05	0.00E+00	3.04E-01	5.07E+02	6.00E-04	1.13E+03	2.69E-04	0.00%	0.00%
Nitrate/Nitrite	5.84E+01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03								1.16E+00	0.00E+00	0.00E+00	2.23E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.35E+01	5.07E+02	4.63E-02	1.13E+03	2.08E-02	0.06%	0.07%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	3.51E-03	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.51E-07	0.00E+00	0.00E+00	5.43E-05	0.00E+00	2.84E-06	0.00E+00	1.45E-06	0.00E+00	5.89E-05	2.10E+00	2.81E-05	6.30E+00	9.36E-06	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	2.98E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.98E-08	0.00E+00	0.00E+00	4.85E-06	0.00E+00	4.28E-08	0.00E+00	1.23E-07	0.00E+00	5.04E-06	2.40E-01	2.10E-05	2.40E+00	2.10E-06	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	1.32E-01	mg/kg	1.00E+00			1.14E+00	NA	2.56E+01	2.56E+01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	1.32E-05	0.00E+00	0.00E+00	1.61E-04	NA	1.45E-02	0.00E+00	7.85E-06	0.00E+00	1.47E-02	8.50E+00	1.73E-03	2.55E+01	5.76E-04	0.00%	0.00%
Selenium	4.63E-03	mg/L	9.08E-01	mg/kg	6.76E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.03E+00	5.02E-01	4.87E-01	4.87E-01	1.95E-01	1.95E-01	9.21E-05	9.09E-05	6.76E-05	3.39E-04	4.38E-03	7.47E-04	0.00E+00	1.41E-03	0.00E+00	4.71E-05	0.00E+00	7.18E-03	2.00E-01	3.59E-02	3.30E-01	2.17E-02	0.05%	0.07%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	3.28E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	3.28E-03	0.00E+00	0.00E+00	9.77E-03	0.00E+00	4.92E-02	0.00E+00	1.95E-03	0.00E+00	6.42E-02	2.63E+02	2.44E-04	7.89E+02	8.14E-05	0.00%	0.00%
Sulfate	5.76E+01	mg/L	7.51E+01	mg/kg	1.04E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	1.15E+00	7.52E-03	1.04E-02	2.20E+01	1.69E-01	1.27E-01	0.00E+00	1.56E-01	0.00E+00	6.18E-03	0.00E+00	2.36E+01	NA	NA	NA	NA	NA	NA
Thallium	7.55E-04	mg/L	6.00E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00							1.50E-05	6.00E-05	0.00E+00	4.29E-03	2.89E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.26E-03	7.40E-03	9.81E-01	7.40E-02	9.81E-02	1.34%	0.32%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Vanadium	6.18E-02	mg/L	0.00E+00	mg/kg	2.15E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	1.23E-03	0.00E+00	2.15E-03	2.36E-02	0.00E+00	2.02E-03	0.00E+00	3.68E-04	0.00E+00	4.54E-05	0.00E+00	2.94E-02	2.10E-01	1.40E-01	2.10E+00	1.40E-02	0.19%	0.05%
Zinc	0.00E+00	mg/L	3.58E+01	mg/kg	6.24E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.31E+00	1.01E+00	7.87E-01	7.87E-01	4.51E-01	4.51E-01	0.00E+00	3.58E-03	6.25E-03	0.00E+00	2.89E-01	3.56E-01	0.00E+00	2.11E-01	0.00E+00	1.01E-02	0.00E+00	8.75E-01	1.60E+02	5.47E-03	3.20E+02	2.74E-03	0.01%	0.01%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	4.0E+01	2.7E+01	54.86%	88.08%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.1E-06	5.6E-07	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	7.1E-05	1.4E-05	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	3.2E-03	3.2E-04	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	3.6E-04	3.6E-05	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	8.1E-05	8.1E-06	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0.6	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.05	unitless
Aq. Invert diet fraction =	0.15	unitless
Terr. Invert diet fraction =	0.15	unitless
Mammal diet fraction =	0.05	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.002394	kg/d
Sediment ingestion rate =	0.002394	kg/d
Food ingestion rate =	0.171	kg/d
Body weight =	5.78	kg
Home range =	2011	acres
Water intake rate =	0.476	L/d
Site Area =	486	acres
Area Use Factor (AUF) =	0.241671	unitless
Exposure Duration (ED) =	1	unitless

Table E-188
Tier 2 COPCs
EEQs and Hazard Indices for the Raccoon -Louisiana Black Bear at LHAAP
Waste Sub-Area/Harrison Bayou Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							Unitless	Unitless	Unitless	Unitless	Unitless	Unitless	Unitless	Unitless		mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	5.16E+00	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	5.16E-04	0.00E+00	0.00E+00	4.16E-02	0.00E+00	1.24E-01	0.00E+00	1.62E-03	0.00E+00	1.68E-01	2.68E+00	6.27E-02	1.33E+01	1.26E-02	0.19%	0.13%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.49E-01	mg/kg	1.00E+00			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.49E-05	0.00E+00	0.00E+00	1.21E-03	0.00E+00	2.83E-03	0.00E+00	4.68E-05	0.00E+00	4.11E-03	1.13E-01	3.64E-02	2.64E-01	1.56E-02	0.11%	0.16%
2,3,7,8-TCDD TEQ	8.00E-09	mg/L	4.00E-06	mg/kg	3.16E-05	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	1.59E-10	4.00E-10	3.17E-09	6.60E-08	2.00E-08	3.74E-07	0.00E+00	5.26E-10	0.00E+00	5.35E-10	0.00E+00	4.64E-07	1.00E-06	4.64E-01	1.00E-05	4.64E-02	1.41%	0.47%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	2.47E+02	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.47E-02	0.00E+00	0.00E+00	2.04E+00	0.00E+00	1.69E-01	0.00E+00	7.75E-02	0.00E+00	2.31E+00	2.00E-01	1.16E+01	3.00E-01	7.70E+00	35.06%	77.24%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	5.56E-01	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	5.57E-05	0.00E+00	0.00E+00	4.62E-03	0.00E+00	5.08E-03	0.00E+00	1.74E-04	0.00E+00	9.93E-03	2.00E-01	4.96E-02	1.50E+00	6.62E-03	0.15%	0.07%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	1.24E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.25E-04	0.00E+00	0.00E+00	1.03E-02	0.00E+00	1.14E-02	0.00E+00	3.90E-04	0.00E+00	2.22E-02	2.00E-01	1.11E-01	6.00E-01	3.70E-02	0.34%	0.37%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	4.55E-04	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.56E-08	0.00E+00	0.00E+00	4.37E-06	0.00E+00	5.47E-08	0.00E+00	1.43E-07	0.00E+00	4.61E-06	8.00E-01	5.77E-06	4.00E+00	1.15E-06	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.48E-03	mg/kg	1.00E+00		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	1.48E-07	0.00E+00	0.00E+00	1.42E-05	0.00E+00	8.61E-07	0.00E+00	4.97E-07	0.00E+00	1.57E-05	8.00E-01	1.97E-05	4.00E+00	3.94E-06	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.98E-04	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	1.99E-08	0.00E+00	0.00E+00	1.97E-06	0.00E+00	2.38E-08	0.00E+00	6.29E-08	0.00E+00	2.08E-06	8.00E-01	2.60E-06	4.00E+00	5.20E-07	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.37E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.37E-08	0.00E+00	0.00E+00	2.31E-06	0.00E+00	9.47E-09	0.00E+00	7.42E-08	0.00E+00	2.42E-06	4.58E+00	5.27E-07	9.16E+00	2.64E-07	0.00%	0.00%
Aluminum	1.12E+01	mg/L	7.50E+03	mg/kg	6.95E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	2.23E-01	7.51E-01	6.96E-01	1.72E-02	3.62E+01	3.21E-01	0.00E+00	4.47E-02	0.00E+00	1.65E-02	0.00E+00	3.83E+01	1.93E+00	1.98E+01	1.93E+01	1.98E+00	60.19%	19.89%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.06E+00	mg/kg	1.00E+00			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	2.06E-04	0.00E+00	0.00E+00	6.63E-04	0.00E+00	3.27E-04	0.00E+00	8.16E-05	0.00E+00	1.28E-03	1.25E-01	1.02E-02	1.25E+00	1.02E-03	0.03%	0.01%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.22E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.22E-07	0.00E+00	0.00E+00	2.17E-05	0.00E+00	7.99E-08	0.00E+00	6.96E-07	0.00E+00	2.27E-05	6.85E-02	3.32E-04	6.85E-01	3.32E-05	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.90E-01	0.00E+00	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.21E-03	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	4.22E-07	0.00E+00	0.00E+00	4.22E-05	0.00E+00	6.46E-08	0.00E+00	7.49E-07	0.00E+00	4.35E-05	6.80E-02	6.39E-04	6.90E-01	6.30E-05	0.00%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.94E-03	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	1.94E-07	0.00E+00	0.00E+00	2.04E-05	0.00E+00	5.34E-09	0.00E+00	1.16E-06	0.00E+00	2.18E-05	6.80E-02	3.21E-04	6.90E-01	3.16E-05	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.90E-01	0.00E+00	0.00%	0.00%
Barium	0.00E+00	mg/L	2.32E+02	mg/kg	5.33E+02	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	2.32E-02	5.34E-02	0.00E+00	1.12E+00	5.20E-02	0.00E+00	3.57E-01	0.00E+00	3.81E-03	0.00E+00	1.61E+00	5.10E+00	3.15E-01	1.98E+01	8.11E-02	0.96%	0.81%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.33E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	0.00E+00	2.33E-05	0.00E+00	0.00E+00	1.17E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.19E-03	1.83E+01	6.48E-05	1.83E+02	6.49E-06	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	mg/L	1.83E-01	mg/kg	4.73E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	2.35E+01	1.33E+00	8.67E-01	8.67E-01	6.72E-01	6.72E-01	0.00E+00	1.83E-05	4.73E-05	0.00E+00	1.18E-04	1.19E-02	0.00E+00	1.76E-03	0.00E+00	1.14E-04	0.00E+00	1.40E-02	1.00E+00	1.40E-02	1.00E+01	1.40E-03	0.04%	0.01%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Chromium	9.95E-03	mg/L	0.00E+00	mg/kg	1.46E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	1.98E-04	0.00E+00	1.46E-03	1.28E-03	0.00E+00	4.80E-03	0.00E+00	2.57E-03	0.00E+00	4.42E-04	0.00E+00	1.08E-02	3.28E+00	3.28E-03	1.31E+01	8.19E-04	0.01%	0.01%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Copper	1.19E-02	mg/L	6.82E+00	mg/kg	1.09E+01	mg/kg	1.00E+00	1.11E+03	1.56E+00	9.82E-01	6.06E-01	4.54E-01	4.54E-01	8.97E-02	8.97E-02	2.36E-04	6.82E-04	1.09E-03	4.71E-03	1.14E-02	1.15E-02	0.00E+00	2.13E-02	0.00E+00	3.51E-04	0.00E+00	5.13E-02	1.17E+01	4.39E-03	1.51E+01	3.39E-03	0.01%	0.03%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-02	0.00E+00	2.00E-01	0.00E+00	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.17E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	3.17E-08	0.00E+00	0.00E+00	2.99E-06	0.00E+00	3.73E-08	0.00E+00	1.38E-07	0.00E+00	3.20E-06	9.20E-02	3.48E-05	9.20E-01	3.48E-06	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.52E-01	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.52E-05	0.00E+00	0.00E+00	1.46E-03	0.00E+00	1.04E-05	0.00E+00	4.77E-05	0.00E+00	1.53E-03	8.00E-02	1.92E-02	2.90E-01	5.29E-03	0.06%	0.05%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	1.03E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.03E-04	0.00E+00	0.00E+00	8.13E-03	0.00E+00	3.71E-02	0.00E+00	3.23E-04	0.00E+00	4.57E-02	1.00E+00	4.57E-02	5.00E+00	9.13E-03	0.14%	0.09%
Iron	1.61E+01	mg/L	0.00E+00	mg/kg	1.12E+04	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	3.21E-01	0.00E+00	1.12E+00	1.44E+00	0.00E+00	4.32E-01	0.00E+00	1.92E-01	0.00E+00	7.03E-03	0.00E+00	3.51E+00	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	5.66E-03	mg/L	0.00E+00	mg/kg	4.77E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	3.89E-01	NA	4.83E-02	4.83E-02	1.16E-02	1.16E-02	1.13E-04	0.00E+00	4.77E-03	9.07E-04	0.00E+00	1.99E-02	NA	9.88E-03	0.00E+00	1.98E-04	0.00E+00	3.58E-02	8.00E+00	4.47E-03	8.00E+01	4.47E-04	0.01%	0.00%
Manganese	6.92E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.50E+02	4.20E-01	NA	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	1.38E-02	0.00E+00	0.00E+00	6.18E-02	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.56E-02	8.80E+01	8.59E-04	2.84E+02	2.66E-04	0.00%	0.00%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	9.02E-02	mg/kg	1.00E+00		1.14E+00	5.42E+00	NA	1.11E+00	1.11E+00	9.15E-02	9.15E-02	0.00E+00	0.00E+00	9.02E-06	0.00E+00	0.00E+00	5.24E-04	NA	4.30E-04	0.00E+00	2.95E-06	0.00E+00	9.66E-04	1.00E+00	9.66E-04	3.00E+00	3.22E-04	0.00%	0.00%
Mercury (methyl)	0.00E+00	mg/L	6.13E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	1.33E+00	NA	NA			0.00E+00	6.13E-06	0.00E+00	0.00E+00	7.46E-05	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	8.08E-05	1.50E-02	5.38E-03	2.50E-02	3.23E-03	0.02%	0.03%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.47E-04	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.47E-08	0.00E+00	0.00E+00	2.48E-06	0.00E+00	3.65E-09	0.00E+00	7.74E-08	0.00E+00	2.59E-06	7.00E-02	3.70E-05	7.00E-01	3.70E-06	0.00%	0.00%
Nickel	0.00E+00	mg/L	9.70E+00	mg/kg	7.04E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	6.15E-02	6.67E-02	6.67E-02	8.71E-02	8.71E-02	0.00E+00	9.71E-04	7.05E-04	0.00E+00	5.06E-03	8.00E-03	0.00E+00	2.01E-03	0.00E+00	2.19E-04	0.00E+00	1.70E-02	4.00E+01	4.24E-04	8.00E+01	2.12E-04	0.00%	0.00%
Nitrate	4.32E-01	mg/L	4.60E-01	mg/kg	6.12E-01	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	8.59E-03	4.60E-05	6.13E-05	4.64E-02	2.07E-04	1.97E-04	0.00E+00	5.52E-04	0.00E+00	2.42E-05	0.00E+00	5.61E-02	5.07E+02	1.11E-04	1.13E+03	4.96E-05	0.00%	0.00%
Nitrate/Nitrite	2.93E+01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02								5.83E-01	0.00E+00	0.00E+00	3.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.73E+00	5.07E+02	7.36E-03	1.13E+03	3.30E-03	0.02%	0.03%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	3.21E-03	mg/kg	1.00E+00			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.21E-07	0.00E+00	0.00E+00	2.86E-05	0.00E+00	2.27E-06	0.00E+00	1.00E-06	0.00E+00	3.22E-05	2.10E+00	1.53E-05	6.30E+00	5.11E-06	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	2.24E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.25E-08	0.00E+00	0.00E+00	2.11E-06	0.00E+00	2.64E-08	0.00E+00	7.03E-08	0.00E+00	2.23E-06	2.40E-01	9.27E-06	2.40E+00	9.27E-07	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	9.65E-02	mg/kg	1.00E+00			3.00E-01	NA	2.91E+01	2.91E+01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	9.66E-06	0.00E+00	0.00E+00	3.11E-05	NA	1.20E-02	0.00E+00	3.82E-06	0.00E+00	1.21E-02	8.50E+00	1.42E-03	2.55E+01	4.74E-04	0.00%	0.00%
Selenium	3.90E-03	mg/L	7.65E-01	mg/kg	5.98E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.07E+00	4.93E-01	4.81E-01	4.81E-01	1.51E-01	1.51E-01	7.77E-05	7.66E-05	5.99E-05	2.86E-04	3.69E-03	6.84E-04	0.00E+00	1.24E-03	0.00E+00	3.23E-05	0.00E+00	6.14E-03	2.00E-01	3.07E-02	3.30E-01	1.86E-02	0.09%	0.19%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.45E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	2.45E-03	0.00E+00	0.00E+00	2.29E-03	0.00E+00	2.21E-02	0.00E+00	9.70E-04	0.00E+00	2.78E-02	2.63E+02	1.06E-04	7.89E+02	3.52E-05	0.00%	0.00%
Sulfate	4.15E+01	mg/L	5.13E+01	mg/kg	4.14E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	8.26E-01	5.13E-03	4.15E-03	4.46E+00	2.31E-02	1.33E-02	0.00E+00	3.73E-02	0.00E+00	1.64E-03	0.00E+00	5.37E+00	NA	NA	NA	NA	NA	NA
Thallium	5.86E-04	mg/L	4.92E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00							1.17E-05	4.92E-05	0.00E+00	1.57E-05	2.37E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.45E-03	7.40E-03	3.31E-01	7.40E-02	3.31E-02	1.01%	0.33%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Vanadium	4.29E-02	mg/L	0.00E+00	mg/kg	1.89E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	8.53E-04	0.00E+00	1.89E-03	4.61E-03	0.00E+00	8.52E-04	0.00E+00	2.92E-04	0.00E+00	3.71E-05	0.00E+00	8.54E-03	2.10E-01	4.07E-02	2.10E+00	4.07E-03	0.12%	0.04%
Zinc	0.00E+00	mg/L	3.15E+01	mg/kg	4.92E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	6.23E+00	1.06E+00	8.74E-01	8.74E-01	1.84E-01	1.84E-01	0.00E+00	3.16E-03	4.93E-03	0.00E+00	6.55E-02	3.29E-01	0.00E+00	1.85E-01	0.00E+00	3.24E-03	0.00E+00	5.90E-01	1.60E+02	3.69E-03	3.20E+02	1.84E-03	0.01%	0.02%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	1.2E+01	7.7E+00	35.55%	77.68%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	5.3E-07	2.6E-07	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	2.8E-05	5.6E-06	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.3E-03	1.3E-04	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	6.5E-05	6.5E-06	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	3.5E-05	3.5E-06	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi \, x \, Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0.6	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.05	unitless
Aq. Invert diet fraction =	0.15	unitless
Terr. Invert diet fraction =	0.15	unitless
Mammal diet fraction =	0.05	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.002394	kg/d
Sediment ingestion rate =	0.002394	kg/d
Food ingestion rate =	0.171	kg/d
Body weight =	5.78	kg
Home range =	2011	acres
Water intake rate =	0.476	L/d
Site Area =	486	acres
Area Use Factor (AUF) =	0.241671	unitless
Exposure Duration (ED) =	1	unitless

Table E-189
Tier 1 COPCs
EEQs and Hazard Indices for the Short-tailed Shrew at LHAAP
Waste Sub-Area/Harrison Bayou Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Total Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
									-----	-----	Unitless	-----	-----	-----	
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E+01	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.24E+00	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00
2,3,7,8-TCDD TEQ	9.44E-09	mg/L	1.41E-05	mg/kg	3.40E-05	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	2.87E+02	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	1.01E+02	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	1.36E+01	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	5.15E-04	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	2.45E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.93E-04	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.13E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Aluminum	2.03E+01	mg/L	1.03E+04	mg/kg	9.30E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	8.22E-01	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.08E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	6.24E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	2.60E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00
Barium	0.00E+00	mg/L	2.86E+02	mg/kg	5.53E+02	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.82E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	5.43E-01	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00
Cadmium	0.00E+00	mg/L	1.83E-01	mg/kg	6.67E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.01E+01	1.33E+00	7.42E-01	7.42E-01	9.22E-01	9.22E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Chromium	1.27E-02	mg/L	0.00E+00	mg/kg	1.72E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Copper	1.69E-02	mg/L	7.78E+00	mg/kg	1.15E+01	mg/kg	1.00E+00	5.92E+03	5.25E+00	9.45E-01	5.59E-01	4.40E-01	4.40E-01	1.49E-01	1.49E-01
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	4.91E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E-01	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	1.36E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00
Iron	2.91E+01	mg/L	0.00E+00	mg/kg	1.42E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01		
Lead	7.24E-03	mg/L	0.00E+00	mg/kg	5.58E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	3.78E-01	NA	4.51E-02	4.51E-02	1.33E-02	1.33E-02
Manganese	9.37E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+03	2.10E+00	NA	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	9.67E-02	mg/kg	1.00E+00		2.87E+00	5.17E+00	NA	1.08E+00	1.08E+00	1.03E-01	1.03E-01
Mercury (methyl)	0.00E+00	mg/L	8.29E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.16E+00	NA	NA		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.89E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00
Nickel	0.00E+00	mg/L	1.10E+01	mg/kg	8.42E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	5.96E-02	6.38E-02	6.38E-02	1.01E-01	1.01E-01
Nitrate	7.46E-01	mg/L	7.48E-01	mg/kg	1.34E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Nitrate/Nitrite	5.84E+01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	4.40E-03	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	2.58E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.61E-01	mg/kg	1.00E+00			1.14E+00	NA	1.93E+01	1.93E+01	1.66E-01	1.66E-01
Selenium	4.63E-03	mg/L	9.08E-01	mg/kg	6.71E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.03E+00	5.02E-01	4.87E-01	4.87E-01	1.95E-01	1.95E-01
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.71E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Sulfate	5.76E+01	mg/L	7.51E+01	mg/kg	4.00E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Thallium	7.55E-04	mg/L	6.00E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Vanadium	6.18E-02	mg/L	0.00E+00	mg/kg	2.36E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03
Zinc	0.00E+00	mg/L	3.58E+01	mg/kg	5.17E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	6.03E+00	1.01E+00	8.56E-01	8.56E-01	4.51E-01	4.51E-01

Chemical	EED Surface Water (mg/kg-d)	EED Sediment (mg/kg-d)	EED Soil (mg/kg-d)	EED Fish (mg/kg-d)	EED Aq. Invert. (mg/kg-d)	EED Terr. Invert. (mg/kg-d)	EED Aq. Plants (mg/kg-d)	EED Terr. Plants (mg/kg-d)	EED Plant Roots (mg/kg-d)	EED Mammals (mg/kg-d)	EED Birds (mg/kg-d)	Total EED (mg/kg-d)	NOAEL (mg/kg-d)	EEQ N	LOAEL (mg/kg-d)	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	2.38E-01	0.00E+00	0.00E+00	2.39E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.42E+01	2.68E+00	9.01E+00	1.33E+01	1.81E+00	0.29%	0.12%
1,3-Dinitrobenzene	0.00E+00	0.00E+00	1.73E-02	0.00E+00	0.00E+00	1.75E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.77E+00	1.13E-01	1.56E+01	2.64E-01	6.69E+00	0.49%	0.43%
2,3,7,8-TCDD TEQ	2.08E-09	0.00E+00	4.75E-07	0.00E+00	0.00E+00	8.13E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.18E-05	1.00E-06	8.18E+01	1.00E-05	8.18E+00	2.59%	0.53%
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	4.01E+00	0.00E+00	0.00E+00	4.11E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.15E+02	2.00E-01	2.07E+03	3.00E-01	1.38E+03	65.61%	89.38%
2,4-Dinitrotoluene	0.00E+00	0.00E+00	1.41E+00	0.00E+00	0.00E+00	1.46E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.47E+02	2.00E-01	7.35E+02	1.50E+00	9.80E+01	23.24%	6.33%
2,6-Dinitrotoluene	0.00E+00	0.00E+00	1.90E-01	0.00E+00	0.00E+00	1.96E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.98E+01	2.00E-01	9.92E+01	6.00E-01	3.31E+01	3.14%	2.14%
4,4'-DDD	0.00E+00	0.00E+00	7.20E-06	0.00E+00	0.00E+00	8.59E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.66E-04	8.00E-01	1.08E-03	4.00E+00	2.17E-04	0.00%	0.00%
4,4'-DDE	0.00E+00	0.00E+00	3.43E-05	0.00E+00	0.00E+00	4.11E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.15E-03	8.00E-01	5.18E-03	4.00E+00	1.04E-03	0.00%	0.00%
4,4'-DDT	0.00E+00	0.00E+00	4.09E-06	0.00E+00	0.00E+00	5.06E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E-04	8.00E-01	6.38E-04	4.00E+00	1.28E-04	0.00%	0.00%
Aldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
alpha-Chlordane	0.00E+00	0.00E+00	2.98E-06	0.00E+00	0.00E+00	3.61E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.64E-04	4.58E+00	7.94E-05	9.16E+00	3.97E-05	0.00%	0.00%
Aluminum	4.47E+00	0.00E+00	1.30E+02	0.00E+00	0.00E+00	1.18E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.52E+02	1.93E+00	1.31E+02	1.93E+01	1.31E+01	4.13%	0.84%
Antimony	0.00E+00	0.00E+00	1.15E-02	0.00E+00	0.00E+00	1.01E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.12E-01	1.25E-01	8.97E-01	1.25E+00	8.97E-02	0.03%	0.01%
Aroclor 1242	0.00E+00	0.00E+00	4.30E-05	0.00E+00	0.00E+00	5.23E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.27E-03	6.85E-02	7.70E-02	6.85E-01	7.70E-03	0.00%	0.00%
Aroclor 1248	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.80E-01	0.00E+00	0.00%	0.00%
Aroclor 1254	0.00E+00	0.00E+00	8.72E-05	0.00E+00	0.00E+00	1.09E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E-02	6.80E-02	1.61E-01	6.80E-01	1.61E-02	0.01%	0.00%
Aroclor 1260	0.00E+00	0.00E+00	3.63E-05	0.00E+00	0.00E+00	4.77E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.80E-03	6.80E-02	7.06E-02	6.80E-01	7.06E-03	0.00%	0.00%
Aroclor 1268	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.80E-01	0.00E+00	0.00%	0.00%
Barium	0.00E+00	0.00E+00	7.72E+00	0.00E+00	0.00E+00	9.50E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.72E+01	5.10E+00	3.38E+00	1.98E+01	8.70E-01	0.11%	0.06%
Benzoic Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	0.00E+00	7.58E-03	0.00E+00	0.00E+00	8.70E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.77E-01	1.59E+01	5.52E-02	4.70E+01	1.87E-02	0.00%	0.00%
Cadmium	0.00E+00	0.00E+00	9.32E-03	0.00E+00	0.00E+00	1.44E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.45E+00	1.00E+00	1.45E+00	1.00E+01	1.45E-01	0.05%	0.01%
Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Chromium	2.79E-03	0.00E+00	2.39E-01	0.00E+00	0.00E+00	5.82E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.07E+00	3.28E+00	1.85E+00	1.31E+01	4.62E-01	0.06%	0.03%
cis-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Copper	3.72E-03	0.00E+00	1.61E-01	0.00E+00	0.00E+00	1.17E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E+00	1.17E+01	1.14E-01	1.51E+01	8.80E-02	0.00%	0.01%
Dieldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-02	0.00E+00	2.00E-01	0.00E+00	0.00%	0.00%
Endrin	0.00E+00	0.00E+00	6.85E-06	0.00E+00	0.00E+00	8.05E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.11E-04	9.20E-02	8.82E-03	9.20E-01	8.82E-04	0.00%	0.00%
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	0.00E+00	1.53E-03	0.00E+00	0.00E+00	1.83E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.85E-01	8.00E-02	2.31E+00	2.90E-01	6.37E-01	0.07%	0.04%
HMX	0.00E+00	0.00E+00	1.89E-02	0.00E+00	0.00E+00	1.86E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.88E+00	1.00E+00	1.88E+00	5.00E+00	3.75E-01	0.06%	0.02%
Iron	6.40E+00	0.00E+00	1.98E+02	0.00E+00	0.00E+00	1.19E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.24E+02	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	1.59E-03	0.00E+00	7.79E-01	0.00E+00	0.00E+00	2.26E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.04E+00	8.00E+00	3.80E-01	8.00E+01	3.80E-02	0.01%	0.00%
Manganese	2.06E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.06E-01	8.80E+01	2.34E-03	2.84E+02	7.26E-04	0.00%	0.00%
Mercury (inorganic)	0.00E+00	0.00E+00	1.35E-03	0.00E+00	0.00E+00	5.37E-02	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.51E-02	1.32E+01	4.17E-03	3.96E+01	1.39E-03	0.00%	0.00%
Mercury (methyl)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	3.20E-02	0.00E+00	1.60E-01	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	0.00E+00	4.04E-06	0.00E+00	0.00E+00	5.04E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.08E-04	7.00E-02	7.26E-03	7.00E-01	7.26E-04	0.00%	0.00%
Nickel	0.00E+00	0.00E+00	1.18E-01	0.00E+00	0.00E+00	4.28E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.39E+00	4.00E+01	1.10E-01	8.00E+01	5.49E-02	0.00%	0.00%
Nitrate	1.64E-01	0.00E+00	1.87E-02	0.00E+00	0.00E+00	1.64E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.46E-01	5.07E+02	6.83E-04	1.13E+03	3.07E-04	0.00%	0.00%
Nitrate/Nitrite	1.29E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.29E+01	5.07E+02	2.54E-02	1.13E+03	1.14E-02	0.00%	0.00%
Oxychlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	0.00E+00	6.14E-05	0.00E+00	0.00E+00	6.82E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.88E-03	2.10E+00	3.28E-03	6.30E+00	1.09E-03	0.00%	0.00%
Pentachloroanisole	0.00E+00	0.00E+00	3.60E-06	0.00E+00	0.00E+00	4.20E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.24E-04	2.40E-01	1.77E-03	2.40E+00	1.77E-04	0.00%	0.00%
Pentachlorophenol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	0.00E+00	3.64E-03	0.00E+00	0.00E+00	3.19E-02	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.56E-02	8.50E+00	4.18E-03	2.55E+01	1.39E-03	0.00%	0.00%
Selenium	1.02E-03	0.00E+00	9.37E-03	0.00E+00	0.00E+00	7.45E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.49E-02	2.00E-01	4.24E-01	3.30E-01	2.57E-01	0.01%	0.02%
Silver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	0.00E+00	3.78E-01	0.00E+00	0.00E+00	8.09E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.19E+00	2.63E+02	4.52E-03	7.89E+02	1.51E-03	0.00%	0.00%
Sulfate	1.27E+01	0.00E+00	5.59E+00	0.00E+00	0.00E+00	4.90E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.72E+01	NA	NA	NA	NA	NA	NA
Thallium	1.66E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.66E-04	7.40E-03	2.24E-02	7.40E-02	2.24E-03	0.00%	0.00%
trans-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Vanadium	1.36E-02	0.00E+00	3.30E-01	0.00E+00	0.00E+00	2.23E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.66E-01	2.10E-01	2.70E+00	2.10E+00	2.70E-01	0.09%	0.02%
Zinc	0.00E+00	0.00E+00	7.22E-01	0.00E+00	0.00E+00	3.35E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.42E+01	1.60E+02	2.14E-01	3.20E+02	1.07E-01	0.01%	0.01%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	2.9E+03	1.5E+03	91.99%	97.85%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	7.9E-05	4.0E-05	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	6.9E-03	1.4E-03	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	3.1E-01	3.1E-02	0.01%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	5.5E-02	1.9E-02	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	8.8E-03	8.8E-04	0.00%	0.00%

Intake Equation:

$$E_j = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi \times Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text tables.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	1	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.000209	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.001611	kg/d
Body weight =	0.015	kg
Home range =	0.074131	acres
Water intake rate =	0.0033	L/d
Site Area =	486	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-190
Tier 2 COPCs
EEQs and Hazard Indices for the Short-tailed Shrew at LHAAP
Waste Sub-Area/Harrison Bayou Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Total Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							--------Unitless								--------	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.26E+01	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.76E-01	0.00E+00	0.00E+00	1.02E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.03E+01	2.68E+00	3.86E+00	1.33E+01	7.77E-01	0.39%	0.17%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.14E+00	mg/kg	1.00E+00			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.59E-02	0.00E+00	0.00E+00	9.26E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.42E-01	1.13E-01	8.33E+00	2.64E-01	3.57E+00	0.84%	0.76%
2,3,7,8-TCDD TEQ	8.00E-09	mg/L	4.00E-06	mg/kg	2.05E-05	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	1.76E-09	0.00E+00	2.87E-07	0.00E+00	0.00E+00	2.43E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.46E-05	1.00E-06	2.46E+01	1.00E-05	2.46E+00	2.48%	0.52%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	1.48E+02	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.07E+00	0.00E+00	0.00E+00	1.22E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E+02	2.00E-01	6.23E+02	3.00E-01	4.15E+02	62.90%	88.30%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	5.04E+01	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	7.04E-01	0.00E+00	0.00E+00	4.19E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.26E+01	2.00E-01	2.13E+02	1.50E+00	2.84E+01	21.52%	6.04%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	7.15E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	9.98E-02	0.00E+00	0.00E+00	5.95E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.05E+00	2.00E-01	3.02E+01	6.00E-01	1.01E+01	3.05%	2.14%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	3.62E-04	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	5.06E-06	0.00E+00	0.00E+00	3.48E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.53E-04	8.00E-01	4.41E-04	4.00E+00	8.83E-05	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.86E-03	mg/kg	1.00E+00		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	2.59E-05	0.00E+00	0.00E+00	1.79E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.82E-03	8.00E-01	2.28E-03	4.00E+00	4.55E-04	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.21E-04	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	3.08E-06	0.00E+00	0.00E+00	2.20E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.23E-04	8.00E-01	2.79E-04	4.00E+00	5.58E-05	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.98E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.76E-06	0.00E+00	0.00E+00	1.93E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.96E-04	4.58E+00	4.28E-05	9.16E+00	2.14E-05	0.00%	0.00%
Aluminum	1.12E+01	mg/L	7.50E+03	mg/kg	8.02E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	2.47E+00	0.00E+00	1.12E+02	0.00E+00	0.00E+00	3.71E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E+02	1.93E+00	7.85E+01	1.93E+01	7.85E+00	7.93%	1.67%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	6.95E-01	mg/kg	1.00E+00			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	9.70E-03	0.00E+00	0.00E+00	2.24E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.21E-02	1.25E-01	2.57E-01	1.25E+00	2.57E-02	0.03%	0.01%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.09E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.92E-05	0.00E+00	0.00E+00	2.05E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.08E-03	6.85E-02	3.03E-02	6.85E-01	3.03E-03	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.80E-01	0.00E+00	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.33E-03	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	6.05E-05	0.00E+00	0.00E+00	4.35E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.41E-03	6.80E-02	6.49E-02	6.80E-01	6.49E-03	0.01%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.97E-03	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	2.76E-05	0.00E+00	0.00E+00	2.09E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.11E-03	6.80E-02	3.11E-02	6.80E-01	3.11E-03	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.80E-01	0.00E+00	0.00%	0.00%
Barium	0.00E+00	mg/L	2.32E+02	mg/kg	4.81E+02	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	0.00E+00	6.72E+00	0.00E+00	0.00E+00	4.71E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.14E+01	5.10E+00	2.24E+00	1.98E+01	5.77E-01	0.23%	0.12%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.33E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	4.45E-01	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	6.21E-03	0.00E+00	0.00E+00	4.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.17E-01	1.59E+01	2.62E-02	4.70E+01	8.87E-03	0.00%	0.00%
Cadmium	0.00E+00	mg/L	1.83E-01	mg/kg	5.66E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	2.17E+01	1.33E+00	7.99E-01	7.99E-01	6.72E-01	6.72E-01	0.00E+00	0.00E+00	7.90E-03	0.00E+00	0.00E+00	1.32E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E+00	1.00E+00	1.33E+00	1.00E+01	1.33E-01	0.13%	0.03%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Chromium	9.95E-03	mg/L	0.00E+00	mg/kg	1.57E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	2.19E-03	0.00E+00	2.20E-01	0.00E+00	0.00E+00	5.17E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.39E-01	3.28E+00	2.25E-01	1.31E+01	5.63E-02	0.02%	0.01%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Copper	1.19E-02	mg/L	6.82E+00	mg/kg	9.30E+00	mg/kg	1.00E+00	1.11E+03	1.56E+00	1.11E+00	6.06E-01	5.01E-01	5.01E-01	8.97E-02	8.97E-02	2.61E-03	0.00E+00	1.30E-01	0.00E+00	0.00E+00	1.11E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.24E+00	1.17E+01	1.06E-01	1.51E+01	8.20E-02	0.01%	0.02%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-02	0.00E+00	2.00E-01	0.00E+00	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.35E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	4.67E-06	0.00E+00	0.00E+00	3.16E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.21E-04	9.20E-02	3.49E-03	9.20E-01	3.49E-04	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	6.30E-02	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	8.80E-04	0.00E+00	0.00E+00	6.05E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.14E-02	8.00E-02	7.68E-01	2.90E-01	2.12E-01	0.08%	0.05%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	1.00E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.40E-02	0.00E+00	0.00E+00	7.90E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.04E-01	1.00E+00	8.04E-01	5.00E+00	1.61E-01	0.08%	0.03%
Iron	1.61E+01	mg/L	0.00E+00	mg/kg	1.27E+04	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	3.55E+00	0.00E+00	1.78E+02	0.00E+00	0.00E+00	4.92E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.30E+02	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	5.66E-03	mg/L	0.00E+00	mg/kg	4.62E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	3.91E-01	NA	4.90E-02	4.90E-02	1.16E-02	1.16E-02	1.25E-03	0.00E+00	6.45E-01	0.00E+00	0.00E+00	1.94E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.59E+00	8.00E+00	3.23E-01	8.00E+01	3.23E-02	0.03%	0.01%
Manganese	6.92E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.50E+02	4.20E-01	NA	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	1.52E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E-01	8.80E+01	1.73E-03	2.84E+02	5.36E-04	0.00%	0.00%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	8.59E-02	mg/kg	1.00E+00		1.14E+00	5.60E+00	NA	1.14E+00	1.14E+00	9.15E-02	9.15E-02	0.00E+00	0.00E+00	1.20E-03	0.00E+00	0.00E+00	5.16E-02	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.28E-02	1.32E+01	4.00E-03	3.96E+01	1.33E-03	0.00%	0.00%
Mercury (methyl)	0.00E+00	mg/L	6.13E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	1.33E+00	NA	NA			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	3.20E-02	0.00E+00	1.60E-01	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-04	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.33E-06	0.00E+00	0.00E+00	2.40E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.43E-04	7.00E-02	3.47E-03	7.00E-01	3.47E-04	0.00%	0.00%
Nickel	0.00E+00	mg/L	9.70E+00	mg/kg	7.73E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	6.15E-02	6.51E-02	6.51E-02	8.71E-02	8.71E-02	0.00E+00	0.00E+00	1.08E-01	0.00E+00	0.00E+00	8.79E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.87E-01	4.00E+01	2.47E-02	8.00E+01	1.23E-02	0.00%	0.00%
Nitrate	4.32E-01	mg/L	4.60E-01	mg/kg	1.00E+00	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	9.50E-02	0.00E+00	1.40E-02	0.00E+00	0.00E+00	3.23E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.41E-01	5.07E+02	2.78E-04	1.13E+03	1.25E-04	0.00%	0.00%
Nitrate/Nitrite	2.93E+01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02								6.44E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.44E+00	5.07E+02	1.27E-02	1.13E+03	5.70E-03	0.00%	0.00%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	3.13E-03	mg/kg	1.00E+00			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.37E-05	0.00E+00	0.00E+00	2.79E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.84E-03	2.10E+00	1.35E-03	6.30E+00	4.51E-04	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	2.05E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.86E-06	0.00E+00	0.00E+00	1.93E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.95E-04	2.40E-01	8.14E-04	2.40E+00	8.14E-05	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	1.63E-01	mg/kg	1.00E+00			3.00E-01	NA	2.34E+01	2.34E+01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	2.28E-03	0.00E+00	0.00E+00	5.26E-03	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.54E-03	8.50E+00	8.87E-04	2.55E+01	2.96E-04	0.00%	0.00%
Selenium	3.90E-03	mg/L	7.65E-01	mg/kg	5.94E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.07E+00	4.93E-01	4.81E-01	4.81E-01	1.51E-01	1.51E-01	8.59E-04	0.00E+00	8.29E-03	0.00E+00	0.00E+00	6.81E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.73E-02	2.00E-01	3.86E-01	3.30E-01	2.34E-01	0.04%	0.05%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	2.95E-01	0.00E+00	0.00E+00	1.98E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.93E-01	2.63E+02	1.87E-03	7.89E+02	6.25E-04	0.00%	0.00%
Sulfate	4.15E+01	mg/L	5.13E+01	mg/kg	2.41E+02	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	9.13E+00	0.00E+00	3.36E+00	0.00E+00	0.00E+00	7.76E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.02E+01	NA	NA	NA	NA	NA	NA
Thallium	5.86E-04	mg/L	4.92E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00							1.29E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.29E-04	7.40E-03	1.74E-02	7.40E-02	1.74E-03	0.00%	0.00%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Vanadium	4.29E-02	mg/L	0.00E+00	mg/kg	2.08E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	9.43E-03	0.00E+00	2.91E-01	0.00E+00	0.00E+00	9.39E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.94E-01	2.10E-01	1.88E+00	2.10E+00	1.88E-01	0.19%	0.04%
Zinc	0.00E+00	mg/L	3.15E+01	mg/kg	4.15E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	6.99E+00	1.06E+00	9.42E-01	9.42E-01	1.84E-01	1.84E-01	0.00E+00	0.00E+00	5.79E-01	0.00E+00	0.00E+00	3.11E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.17E+01	1.60E+02	1.98E-01	3.20E+02	9.91E-02	0.02%	0.02%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	8.7E+02	4.5E+02	87.47%	96.49%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	4.3E-05	2.1E-05	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	3.0E-03	6.0E-04	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.3E-01	1.3E-02	0.01%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	2.6E-02	8.9E-03	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	3.5E-03	3.5E-04	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text tables.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	1	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.000209	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.001611	kg/d
Body weight =	0.015	kg
Home range =	0.963707	acres
Water intake rate =	0.0033	L/d
Site Area =	486	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-191
Tier 1 COPCs
EEQs and Hazard Indices for the Red Fox at LHAAP
Waste Sub-Area/Harrison Bayou Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Total Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
									-----------	-----------	-----------	Unitless	-----------	-----------	
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.71E+01	mg/kg	#######			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.24E+00	mg/kg	#######			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00
2,3,7,8-TCDD TEQ	9.44E-09	mg/L	1.41E-05	mg/kg	3.40E-05	mg/kg	#######	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	2.87E+02	mg/kg	#######			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	1.01E+02	mg/kg	#######			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	1.36E+01	mg/kg	#######			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	5.15E-04	mg/kg	#######		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	2.45E-03	mg/kg	#######		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.93E-04	mg/kg	#######		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.13E-04	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Aluminum	2.03E+01	mg/L	1.03E+04	mg/kg	9.30E+03	mg/kg	#######	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	8.22E-01	mg/kg	#######			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.08E-03	mg/kg	#######			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	6.24E-03	mg/kg	#######		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	2.60E-03	mg/kg	#######			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00
Barium	0.00E+00	mg/L	2.86E+02	mg/kg	5.53E+02	mg/kg	#######	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.82E-01	mg/kg	0.00E+00	mg/kg	#######	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	5.43E-01	mg/kg	#######			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00
Cadmium	0.00E+00	mg/L	1.83E-01	mg/kg	6.67E-01	mg/kg	#######	1.63E+03	7.99E+00	2.01E+01	1.33E+00	7.42E-01	7.42E-01	9.22E-01	9.22E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Chromium	1.27E-02	mg/L	0.00E+00	mg/kg	1.72E+01	mg/kg	#######	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Copper	1.69E-02	mg/L	7.78E+00	mg/kg	1.15E+01	mg/kg	#######	5.92E+03	5.25E+00	9.45E-01	5.59E-01	4.40E-01	4.40E-01	1.49E-01	1.49E-01
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	4.91E-04	mg/kg	#######			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E-01	mg/kg	#######			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	1.36E+00	mg/kg	#######			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00
Iron	2.91E+01	mg/L	0.00E+00	mg/kg	1.42E+04	mg/kg	#######	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		2.19E+01		1.41E+01	1.41E+01	1.41E+01		
Lead	7.24E-03	mg/L	0.00E+00	mg/kg	5.58E+01	mg/kg	#######	1.50E+03	6.07E-01	3.78E-01	NA	4.51E-02	4.51E-02	1.33E-02	1.33E-02
Manganese	9.37E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	2.00E+03	2.10E+00	NA	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	9.67E-02	mg/kg	#######		2.87E+00	5.17E+00	NA	1.08E+00	1.08E+00	1.03E-01	1.03E-01
Mercury (methyl)	0.00E+00	mg/L	8.29E-02	mg/kg	0.00E+00	mg/kg	#######		2.87E+00	NA	1.16E+00	NA	NA		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.89E-04	mg/kg	#######			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00
Nickel	0.00E+00	mg/L	1.10E+01	mg/kg	8.42E+00	mg/kg	#######		2.32E+00	4.73E+00	5.96E-02	6.38E-02	6.38E-02	1.01E-01	1.01E-01
Nitrate	7.46E-01	mg/L	7.48E-01	mg/kg	1.34E+00	mg/kg	#######	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Nitrate/Nitrite	5.84E+01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	1.07E+03							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	4.40E-03	mg/kg	#######			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	2.58E-04	mg/kg	#######			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	2.61E-01	mg/kg	#######			1.14E+00	NA	1.93E+01	1.93E+01	1.66E-01	1.66E-01
Selenium	4.63E-03	mg/L	9.08E-01	mg/kg	6.71E-01	mg/kg	#######	2.05E+02	4.50E+00	1.03E+00	5.02E-01	4.87E-01	4.87E-01	1.95E-01	1.95E-01
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.50E+00		1.70E-01	1.70E-01	1.70E-01		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.71E+01	mg/kg	#######		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Sulfate	5.76E+01	mg/L	7.51E+01	mg/kg	4.00E+02	mg/kg	#######	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Thallium	7.55E-04	mg/L	6.00E-01	mg/kg	0.00E+00	mg/kg	#######	1.59E+04	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Vanadium	6.18E-02	mg/L	0.00E+00	mg/kg	2.36E+01	mg/kg	#######	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03
Zinc	0.00E+00	mg/L	3.58E+01	mg/kg	5.17E+01	mg/kg	#######	5.00E+03	7.53E+00	6.03E+00	1.01E+00	8.56E-01	8.56E-01	4.51E-01	4.51E-01

Chemical	EED Surface Water (mg/kg-d)	EED Sediment (mg/kg-d)	EED Soil (mg/kg-d)	EED Fish (mg/kg-d)	EED Aq. Invert. (mg/kg-d)	EED Terr. Invert. (mg/kg-d)	EED Aq. Plants (mg/kg-d)	EED Terr. Plants (mg/kg-d)	EED Plant Roots (mg/kg-d)	EED Mammals (mg/kg-d)	EED Birds (mg/kg-d)	Total EED (mg/kg-d)	NOAEL (mg/kg-d)	EEQ N	LOAEL (mg/kg-d)	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	1.62E-02	0.00E+00	0.00E+00	2.26E-01	0.00E+00	6.19E-01	0.00E+00	4.65E-01	9.96E-02	1.43E+00	2.68E+00	5.32E-01	1.33E+01	1.07E-01	0.47%	0.20%
1,3-Dinitrobenzene	0.00E+00	0.00E+00	1.17E-03	0.00E+00	0.00E+00	1.65E-02	0.00E+00	2.68E-02	0.00E+00	3.38E-02	7.23E-03	8.54E-02	1.13E-01	7.56E-01	2.64E-01	3.24E-01	0.66%	0.60%
2,3,7,8-TCDD TEQ	7.97E-10	0.00E+00	3.23E-08	0.00E+00	0.00E+00	7.67E-07	0.00E+00	6.27E-10	0.00E+00	4.90E-08	1.05E-08	8.60E-07	1.00E-06	8.60E-01	1.00E-05	8.60E-02	0.75%	0.16%
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	2.72E-01	0.00E+00	0.00E+00	3.88E+00	0.00E+00	3.72E-01	0.00E+00	7.82E+00	1.68E+00	1.40E+01	2.00E-01	7.01E+01	3.00E-01	4.67E+01	61.29%	87.30%
2,4-Dinitrotoluene	0.00E+00	0.00E+00	9.56E-02	0.00E+00	0.00E+00	1.37E+00	0.00E+00	1.14E+00	0.00E+00	2.75E+00	5.89E-01	5.94E+00	2.00E-01	2.97E+01	1.50E+00	3.96E+00	25.99%	7.40%
2,6-Dinitrotoluene	0.00E+00	0.00E+00	1.29E-02	0.00E+00	0.00E+00	1.85E-01	0.00E+00	1.31E-01	0.00E+00	3.71E-01	7.95E-02	7.79E-01	2.00E-01	3.90E+00	6.00E-01	1.30E+00	3.41%	2.43%
4,4'-DDD	0.00E+00	0.00E+00	4.88E-07	0.00E+00	0.00E+00	8.11E-06	0.00E+00	1.67E-07	0.00E+00	1.40E-05	3.01E-06	2.58E-05	8.00E-01	3.23E-05	4.00E+00	6.45E-06	0.00%	0.00%
4,4'-DDE	0.00E+00	0.00E+00	2.32E-06	0.00E+00	0.00E+00	3.88E-05	0.00E+00	6.17E-06	0.00E+00	5.77E-05	1.24E-05	1.17E-04	8.00E-01	1.47E-04	4.00E+00	2.93E-05	0.00%	0.00%
4,4'-DDT	0.00E+00	0.00E+00	2.77E-07	0.00E+00	0.00E+00	4.77E-06	0.00E+00	9.49E-08	0.00E+00	1.15E-05	2.47E-06	1.91E-05	8.00E-01	2.39E-05	4.00E+00	4.78E-06	0.00%	0.00%
Aldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
alpha-Chlordane	0.00E+00	0.00E+00	2.02E-07	0.00E+00	0.00E+00	3.40E-06	0.00E+00	3.48E-08	0.00E+00	5.81E-06	1.24E-06	1.07E-05	4.58E+00	2.33E-06	9.16E+00	1.17E-06	0.00%	0.00%
Aluminum	1.72E+00	0.00E+00	8.81E+00	0.00E+00	0.00E+00	1.11E+00	0.00E+00	8.67E-02	0.00E+00	1.90E+00	4.08E-01	1.40E+01	1.93E+00	7.27E+00	1.93E+01	7.27E-01	6.36%	1.36%
Antimony	0.00E+00	0.00E+00	7.79E-04	0.00E+00	0.00E+00	9.49E-04	0.00E+00	2.33E-04	0.00E+00	3.23E-03	6.92E-04	5.88E-03	1.25E-01	4.71E-02	1.25E+00	4.71E-03	0.04%	0.01%
Aroclor 1242	0.00E+00	0.00E+00	2.92E-06	0.00E+00	0.00E+00	4.94E-05	0.00E+00	2.04E-06	0.00E+00	8.39E-05	1.80E-05	1.56E-04	6.85E-02	2.28E-03	6.85E-01	2.28E-04	0.00%	0.00%
Aroclor 1248	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.90E-01	0.00E+00	0.00%	0.00%
Aroclor 1254	0.00E+00	0.00E+00	5.91E-06	0.00E+00	0.00E+00	1.03E-04	0.00E+00	2.24E-07	0.00E+00	1.57E-04	3.36E-05	2.99E-04	6.80E-02	4.40E-03	6.90E-01	4.33E-04	0.00%	0.00%
Aroclor 1260	0.00E+00	0.00E+00	2.46E-06	0.00E+00	0.00E+00	4.50E-05	0.00E+00	4.79E-08	0.00E+00	1.18E-04	2.53E-05	1.91E-04	6.80E-02	2.81E-03	6.90E-01	2.77E-04	0.00%	0.00%
Aroclor 1268	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.90E-01	0.00E+00	0.00%	0.00%
Barium	0.00E+00	0.00E+00	5.24E-01	0.00E+00	0.00E+00	8.96E-02	0.00E+00	2.06E+00	0.00E+00	4.33E-01	9.28E-02	3.20E+00	5.10E+00	6.28E-01	1.98E+01	1.62E-01	0.55%	0.30%
Benzoic Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	0.00E+00	5.14E-04	0.00E+00	0.00E+00	8.20E-03	0.00E+00	1.36E-04	0.00E+00	1.48E-02	3.17E-03	2.68E-02	1.59E+01	1.69E-03	4.70E+01	5.71E-04	0.00%	0.00%
Cadmium	0.00E+00	0.00E+00	6.32E-04	0.00E+00	0.00E+00	1.36E-02	0.00E+00	2.01E-03	0.00E+00	1.46E-02	3.12E-03	3.39E-02	1.00E+00	3.39E-02	1.00E+01	3.39E-03	0.03%	0.01%
Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Chromium	1.07E-03	0.00E+00	1.62E-02	0.00E+00	0.00E+00	5.50E-02	0.00E+00	3.34E-02	0.00E+00	1.35E-01	2.90E-02	2.70E-01	3.28E+00	8.22E-02	1.31E+01	2.05E-02	0.07%	0.04%
cis-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Copper	1.43E-03	0.00E+00	1.09E-02	0.00E+00	0.00E+00	1.10E-02	0.00E+00	2.05E-02	0.00E+00	4.06E-02	8.71E-03	9.32E-02	1.17E+01	7.97E-03	1.51E+01	6.16E-03	0.01%	0.01%
Dieldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-02	0.00E+00	2.00E-01	0.00E+00	0.00%	0.00%
Endrin	0.00E+00	0.00E+00	4.65E-07	0.00E+00	0.00E+00	7.59E-06	0.00E+00	7.60E-08	0.00E+00	1.41E-05	3.02E-06	2.53E-05	9.20E-02	2.75E-04	9.20E-01	2.75E-05	0.00%	0.00%
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	0.00E+00	1.04E-04	0.00E+00	0.00E+00	1.73E-03	0.00E+00	8.41E-06	0.00E+00	2.99E-03	6.42E-04	5.48E-03	8.00E-02	6.84E-02	2.90E-01	1.89E-02	0.06%	0.04%
HMX	0.00E+00	0.00E+00	1.29E-03	0.00E+00	0.00E+00	1.75E-02	0.00E+00	4.61E-02	0.00E+00	3.70E-02	7.92E-03	1.10E-01	1.00E+00	1.10E-01	5.00E+00	2.20E-02	0.10%	0.04%
Iron	2.46E+00	0.00E+00	1.35E+01	0.00E+00	0.00E+00	1.12E+00	0.00E+00	2.30E-01	0.00E+00	6.95E-01	1.49E-01	1.81E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	6.12E-04	0.00E+00	5.28E-02	0.00E+00	0.00E+00	2.13E-02	NA	1.02E-02	0.00E+00	1.75E-02	3.76E-03	1.06E-01	8.00E+00	1.33E-02	8.00E+01	1.33E-03	0.01%	0.00%
Manganese	7.91E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.91E-02	8.80E+01	8.99E-04	2.84E+02	2.79E-04	0.00%	0.00%
Mercury (inorganic)	0.00E+00	0.00E+00	9.16E-05	0.00E+00	0.00E+00	5.07E-04	NA	4.22E-04	0.00E+00	2.35E-04	5.04E-05	1.31E-03	1.00E+00	1.31E-03	3.00E+00	4.35E-04	0.00%	0.00%
Mercury (methyl)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	1.50E-02	0.00E+00	2.50E-02	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	0.00E+00	2.74E-07	0.00E+00	0.00E+00	4.75E-06	0.00E+00	4.03E-08	0.00E+00	7.88E-06	1.69E-06	1.46E-05	7.00E-02	2.09E-04	7.00E-01	2.09E-05	0.00%	0.00%
Nickel	0.00E+00	0.00E+00	7.97E-03	0.00E+00	0.00E+00	4.03E-02	0.00E+00	2.18E-03	0.00E+00	2.01E-02	4.31E-03	7.49E-02	4.00E+01	1.87E-03	8.00E+01	9.37E-04	0.00%	0.00%
Nitrate	6.30E-02	0.00E+00	1.27E-03	0.00E+00	0.00E+00	1.55E-03	0.00E+00	1.90E-03	0.00E+00	5.26E-03	1.13E-03	7.41E-02	5.07E+02	1.46E-04	1.13E+03	6.55E-05	0.00%	0.00%
Nitrate/Nitrite	4.93E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.93E+00	5.07E+02	9.73E-03	1.13E+03	4.37E-03	0.01%	0.01%
Oxychlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	0.00E+00	4.17E-06	0.00E+00	0.00E+00	6.43E-05	0.00E+00	3.37E-06	0.00E+00	1.20E-04	2.57E-05	2.17E-04	2.10E+00	1.04E-04	6.30E+00	3.45E-05	0.00%	0.00%
Pentachloroanisole	0.00E+00	0.00E+00	2.44E-07	0.00E+00	0.00E+00	3.96E-06	0.00E+00	3.50E-08	0.00E+00	7.02E-06	1.50E-06	1.28E-05	2.40E-01	5.32E-05	2.40E+00	5.32E-06	0.00%	0.00%
Pentachlorophenol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	0.00E+00	2.47E-04	0.00E+00	0.00E+00	3.01E-04	NA	2.04E-02	0.00E+00	1.02E-03	2.20E-04	2.22E-02	8.50E+00	2.62E-03	2.55E+01	8.72E-04	0.00%	0.00%
Selenium	3.91E-04	0.00E+00	6.36E-04	0.00E+00	0.00E+00	7.03E-04	0.00E+00	1.32E-03	0.00E+00	3.10E-03	6.63E-04	6.81E-03	2.00E-01	3.41E-02	3.30E-01	2.06E-02	0.03%	0.04%
Silver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	0.00E+00	2.57E-02	0.00E+00	0.00E+00	7.63E-03	0.00E+00	3.84E-02	0.00E+00	1.06E-01	2.28E-02	2.01E-01	2.63E+02	7.65E-04	7.89E+02	2.55E-04	0.00%	0.00%
Sulfate	4.86E+00	0.00E+00	3.79E-01	0.00E+00	0.00E+00	4.62E-01	0.00E+00	5.67E-01	0.00E+00	1.57E+00	3.37E-01	8.18E+00	NA	NA	NA	NA	NA	NA
Thallium	6.38E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.38E-05	7.40E-03	8.62E-03	7.40E-02	8.62E-04	0.01%	0.00%
trans-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Vanadium	5.22E-03	0.00E+00	2.24E-02	0.00E+00	0.00E+00	2.10E-03	0.00E+00	3.83E-04	0.00E+00	3.30E-03	7.08E-04	3.41E-02	2.10E-01	1.62E-01	2.10E+00	1.62E-02	0.14%	0.03%
Zinc	0.00E+00	0.00E+00	4.90E-02	0.00E+00	0.00E+00	3.16E-01	0.00E+00	1.79E-01	0.00E+00	5.51E-01	1.18E-01	1.21E+00	1.60E+02	7.58E-03	3.20E+02	3.79E-03	0.01%	0.01%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	1.0E+02	5.2E+01	90.68%	97.14%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	2.3E-06	1.2E-06	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	2.0E-04	4.1E-05	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	9.5E-03	9.4E-04	0.01%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	1.7E-03	5.7E-04	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	2.7E-04	2.7E-05	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text tables.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0.12	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0.03	unitless
Mammal diet fraction =	0.7	unitless
Bird diet fraction =	0.15	unitless
Soil ingestion rate =	0.004263	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.152	kg/d
Body weight =	4.5	kg
Home range =	247.1044	acres
Water intake rate =	0.38	L/d
Site Area =	486	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-192
Tier 2 COPCs
EEQs and Hazard Indices for the Red Fox at LHAAP
Waste Sub-Area/Harrison Bayou Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Total Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							---Unitless---									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.26E+01	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.26E-03	0.00E+00	0.00E+00	1.82E-02	0.00E+00	5.43E-02	0.00E+00	4.94E-02	1.06E-02	1.35E-01	2.68E+00	5.03E-02	1.33E+01	1.01E-02	0.59%	0.27%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.14E+00	mg/kg	1.00E+00			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.04E-04	0.00E+00	0.00E+00	1.66E-03	0.00E+00	3.86E-03	0.00E+00	4.47E-03	9.57E-04	1.11E-02	1.13E-01	9.86E-02	2.64E-01	4.22E-02	1.16%	1.11%
2,3,7,8-TCDD TEQ	8.00E-09	mg/L	4.00E-06	mg/kg	2.05E-05	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	1.28E-10	0.00E+00	3.68E-09	0.00E+00	0.00E+00	4.34E-08	0.00E+00	6.11E-11	0.00E+00	4.35E-09	9.32E-10	5.25E-08	1.00E-06	5.25E-02	1.00E-05	5.25E-03	0.62%	0.14%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	1.48E+02	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	2.66E-02	0.00E+00	0.00E+00	2.19E-01	0.00E+00	1.82E-02	0.00E+00	5.82E-01	1.25E-01	9.71E-01	2.00E-01	4.85E+00	3.00E-01	3.24E+00	57.01%	85.43%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	5.04E+01	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	9.04E-03	0.00E+00	0.00E+00	7.49E-02	0.00E+00	8.23E-02	0.00E+00	1.98E-01	4.24E-02	4.07E-01	2.00E-01	2.03E+00	1.50E+00	2.71E-01	23.87%	7.16%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	7.15E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.28E-03	0.00E+00	0.00E+00	1.06E-02	0.00E+00	1.17E-02	0.00E+00	2.81E-02	6.02E-03	5.77E-02	2.00E-01	2.88E-01	6.00E-01	9.61E-02	3.39%	2.54%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	3.62E-04	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	6.50E-08	0.00E+00	0.00E+00	6.22E-07	0.00E+00	7.79E-09	0.00E+00	1.42E-06	3.05E-07	2.42E-06	8.00E-01	3.03E-06	4.00E+00	6.05E-07	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.86E-03	mg/kg	1.00E+00		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	3.33E-07	0.00E+00	0.00E+00	3.21E-06	0.00E+00	1.94E-07	0.00E+00	7.84E-06	1.68E-06	1.33E-05	8.00E-01	1.66E-05	4.00E+00	3.31E-06	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.21E-04	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	3.96E-08	0.00E+00	0.00E+00	3.93E-07	0.00E+00	4.75E-09	0.00E+00	8.77E-07	1.88E-07	1.50E-06	8.00E-01	1.88E-06	4.00E+00	3.76E-07	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	1.98E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.55E-08	0.00E+00	0.00E+00	3.45E-07	0.00E+00	1.42E-09	0.00E+00	7.77E-07	1.66E-07	1.33E-06	4.58E+00	2.89E-07	9.16E+00	1.45E-07	0.00%	0.00%
Aluminum	1.12E+01	mg/L	7.50E+03	mg/kg	8.02E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	1.80E-01	0.00E+00	1.44E+00	0.00E+00	0.00E+00	6.62E-02	0.00E+00	9.24E-03	0.00E+00	2.38E-01	5.10E-02	1.98E+00	1.93E+00	1.03E+00	1.93E+01	1.03E-01	12.07%	2.71%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	6.95E-01	mg/kg	1.00E+00			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	1.25E-04	0.00E+00	0.00E+00	4.00E-05	0.00E+00	1.97E-05	0.00E+00	3.45E-04	7.39E-05	6.03E-04	1.25E-01	4.83E-03	1.25E+00	4.83E-04	0.06%	0.01%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.09E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.75E-07	0.00E+00	0.00E+00	3.66E-06	0.00E+00	1.35E-08	0.00E+00	8.21E-06	1.76E-06	1.40E-05	6.85E-02	2.05E-04	6.85E-01	2.05E-05	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.90E-01	0.00E+00	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.33E-03	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	7.78E-07	0.00E+00	0.00E+00	7.78E-06	0.00E+00	1.19E-08	0.00E+00	9.66E-06	2.07E-06	2.03E-05	6.80E-02	2.99E-04	6.90E-01	2.94E-05	0.00%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.97E-03	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	3.54E-07	0.00E+00	0.00E+00	3.73E-06	0.00E+00	9.75E-10	0.00E+00	1.48E-05	3.17E-06	2.20E-05	6.80E-02	3.24E-04	6.90E-01	3.19E-05	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.90E-01	0.00E+00	0.00%	0.00%
Barium	0.00E+00	mg/L	2.32E+02	mg/kg	4.81E+02	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	0.00E+00	8.64E-02	0.00E+00	0.00E+00	8.41E-03	0.00E+00	5.77E-02	0.00E+00	4.32E-02	9.25E-03	2.05E-01	5.10E+00	4.02E-02	1.98E+01	1.03E-02	0.47%	0.27%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.33E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	4.45E-01	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	7.98E-05	0.00E+00	0.00E+00	7.34E-04	0.00E+00	1.92E-05	0.00E+00	1.75E-03	3.74E-04	2.95E-03	1.59E+01	1.86E-04	4.70E+01	6.29E-05	0.00%	0.00%
Cadmium	0.00E+00	mg/L	1.83E-01	mg/kg	5.66E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	2.17E+01	1.33E+00	7.99E-01	7.99E-01	6.72E-01	6.72E-01	0.00E+00	0.00E+00	1.02E-04	0.00E+00	0.00E+00	2.36E-03	0.00E+00	3.48E-04	0.00E+00	1.71E-03	3.65E-04	4.88E-03	1.00E+00	4.88E-03	1.00E+01	4.88E-04	0.06%	0.01%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Chromium	9.95E-03	mg/L	0.00E+00	mg/kg	1.57E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	1.59E-04	0.00E+00	2.83E-03	0.00E+00	0.00E+00	9.25E-04	0.00E+00	4.96E-04	0.00E+00	5.97E-03	1.28E-03	1.17E-02	3.28E+00	3.55E-03	1.31E+01	8.87E-04	0.04%	0.02%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Copper	1.19E-02	mg/L	6.82E+00	mg/kg	9.30E+00	mg/kg	1.00E+00	1.11E+03	1.56E+00	1.11E+00	6.06E-01	5.01E-01	5.01E-01	8.97E-02	8.97E-02	1.90E-04	0.00E+00	1.67E-03	0.00E+00	0.00E+00	1.98E-03	0.00E+00	3.58E-03	0.00E+00	3.74E-03	8.01E-04	1.20E-02	1.17E+01	1.02E-03	1.51E+01	7.90E-04	0.01%	0.02%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-02	0.00E+00	2.00E-01	0.00E+00	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.35E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	6.01E-08	0.00E+00	0.00E+00	5.66E-07	0.00E+00	7.05E-09	0.00E+00	1.82E-06	3.90E-07	2.84E-06	9.20E-02	3.09E-05	9.20E-01	3.09E-06	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	6.30E-02	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.13E-05	0.00E+00	0.00E+00	1.08E-04	0.00E+00	7.69E-07	0.00E+00	2.47E-04	5.30E-05	4.21E-04	8.00E-02	5.26E-03	2.90E-01	1.45E-03	0.06%	0.04%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	1.00E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	1.80E-04	0.00E+00	0.00E+00	1.41E-03	0.00E+00	6.44E-03	0.00E+00	3.93E-03	8.42E-04	1.28E-02	1.00E+00	1.28E-02	5.00E+00	2.56E-03	0.15%	0.07%
Iron	1.61E+01	mg/L	0.00E+00	mg/kg	1.27E+04	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	2.58E-01	0.00E+00	2.28E+00	0.00E+00	0.00E+00	8.79E-02	0.00E+00	3.91E-02	0.00E+00	1.00E-01	2.15E-02	2.79E+00	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	5.66E-03	mg/L	0.00E+00	mg/kg	4.62E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	3.91E-01	NA	4.90E-02	4.90E-02	1.16E-02	1.16E-02	9.06E-05	0.00E+00	8.29E-03	0.00E+00	0.00E+00	3.47E-03	NA	1.74E-03	0.00E+00	2.41E-03	5.16E-04	1.65E-02	8.00E+00	2.06E-03	8.00E+01	2.06E-04	0.02%	0.01%
Manganese	6.92E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.50E+02	4.20E-01	NA	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	1.11E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E-02	8.80E+01	1.26E-04	2.84E+02	3.90E-05	0.00%	0.00%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	8.59E-02	mg/kg	1.00E+00		1.14E+00	5.60E+00	NA	1.14E+00	1.14E+00	9.15E-02	9.15E-02	0.00E+00	0.00E+00	1.54E-05	0.00E+00	0.00E+00	9.23E-05	NA	7.50E-05	0.00E+00	3.52E-05	7.54E-06	2.26E-04	1.00E+00	2.26E-04	3.00E+00	7.52E-05	0.00%	0.00%
Mercury (methyl)	0.00E+00	mg/L	6.13E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	1.33E+00	NA	NA			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	1.50E-02	0.00E+00	2.50E-02	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-04	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	4.28E-08	0.00E+00	0.00E+00	4.28E-07	0.00E+00	6.29E-10	0.00E+00	9.36E-07	2.01E-07	1.61E-06	7.00E-02	2.30E-05	7.00E-01	2.30E-06	0.00%	0.00%
Nickel	0.00E+00	mg/L	9.70E+00	mg/kg	7.73E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	6.15E-02	6.51E-02	6.51E-02	8.71E-02	8.71E-02	0.00E+00	0.00E+00	1.39E-03	0.00E+00	0.00E+00	1.57E-03	0.00E+00	3.87E-04	0.00E+00	3.01E-03	6.46E-04	7.01E-03	4.00E+01	1.75E-04	8.00E+01	8.76E-05	0.00%	0.00%
Nitrate	4.32E-01	mg/L	4.60E-01	mg/kg	1.00E+00	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	6.91E-03	0.00E+00	1.80E-04	0.00E+00	0.00E+00	5.77E-05	0.00E+00	1.61E-04	0.00E+00	4.97E-04	1.06E-04	7.91E-03	5.07E+02	1.56E-05	1.13E+03	7.00E-06	0.00%	0.00%
Nitrate/Nitrite	2.93E+01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02								4.69E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.69E-01	5.07E+02	9.24E-04	1.13E+03	4.15E-04	0.01%	0.01%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	3.13E-03	mg/kg	1.00E+00			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	5.61E-07	0.00E+00	0.00E+00	5.00E-06	0.00E+00	3.97E-07	0.00E+00	1.23E-05	2.63E-06	2.09E-05	2.10E+00	9.94E-06	6.30E+00	3.31E-06	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	2.05E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	3.68E-08	0.00E+00	0.00E+00	3.44E-07	0.00E+00	4.31E-09	0.00E+00	8.04E-07	1.72E-07	1.36E-06	2.40E-01	5.67E-06	2.40E+00	5.67E-07	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	1.63E-01	mg/kg	1.00E+00			3.00E-01	NA	2.34E+01	2.34E+01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	2.93E-05	0.00E+00	0.00E+00	9.40E-06	NA	2.94E-03	0.00E+00	8.10E-05	1.74E-05	3.08E-03	8.50E+00	3.62E-04	2.55E+01	1.21E-04	0.00%	0.00%
Selenium	3.90E-03	mg/L	7.65E-01	mg/kg	5.94E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.07E+00	4.93E-01	4.81E-01	4.81E-01	1.51E-01	1.51E-01	6.25E-05	0.00E+00	1.07E-04	0.00E+00	0.00E+00	1.22E-04	0.00E+00	2.19E-04	0.00E+00	4.02E-04	8.61E-05	9.98E-04	2.00E-01	4.99E-03	3.30E-01	3.02E-03	0.06%	0.08%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.12E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	3.80E-03	0.00E+00	0.00E+00	3.53E-04	0.00E+00	3.41E-03	0.00E+00	1.05E-02	2.25E-03	2.03E-02	2.63E+02	7.72E-05	7.89E+02	2.57E-05	0.00%	0.00%
Sulfate	4.15E+01	mg/L	5.13E+01	mg/kg	2.41E+02	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	6.64E-01	0.00E+00	4.32E-02	0.00E+00	0.00E+00	1.39E-02	0.00E+00	3.88E-02	0.00E+00	1.19E-01	2.56E-02	9.05E-01	NA	NA	NA	NA	NA	NA
Thallium	5.86E-04	mg/L	4.92E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00							9.38E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.38E-06	7.40E-03	1.27E-03	7.40E-02	1.27E-04	0.01%	0.00%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Vanadium	4.29E-02	mg/L	0.00E+00	mg/kg	2.08E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	6.86E-04	0.00E+00	3.74E-03	0.00E+00	0.00E+00	1.68E-04	0.00E+00	5.76E-05	0.00E+00	5.12E-04	1.10E-04	5.27E-03	2.10E-01	2.51E-02	2.10E+00	2.51E-03	0.29%	0.07%
Zinc	0.00E+00	mg/L	3.15E+01	mg/kg	4.15E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	6.99E+00	1.06E+00	9.42E-01	9.42E-01	1.84E-01	1.84E-01	0.00E+00	0.00E+00	7.45E-03	0.00E+00	0.00E+00	5.57E-02	0.00E+00	3.00E-02	0.00E+00	3.42E-02	7.34E-03	1.35E-01	1.60E+02	8.42E-04	3.20E+02	4.21E-04	0.01%	0.01%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	7.2E+00	3.6E+00	84.27%	95.13%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	2.9E-07	1.4E-07	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	2.1E-05	4.3E-06	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	8.3E-04	8.2E-05	0.01%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	1.9E-04	6.3E-05	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	3.1E-05	3.1E-06	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\,x\,Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0.12	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0.03	unitless
Mammal diet fraction =	0.7	unitless
Bird diet fraction =	0.15	unitless
Soil ingestion rate =	0.004263	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.152	kg/d
Body weight =	4.5	kg
Home range =	2565	acres
Water intake rate =	0.38	L/d
Site Area =	486	acres
Area Use Factor (AUF) =	0.189474	unitless
Exposure Duration (ED) =	1	unitless

Table E-193
Tier 1 COPCs
EEQs and Hazard Indices for the Muskrat at LHAAP
Waste Sub-Area/Harrison Bayou Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							---Unitless---									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	8.46E+00	mg/kg	#######			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.56E-01	0.00E+00	0.00E+00	0.00E+00	5.56E-01	2.68E+00	2.07E-01	1.33E+01	4.18E-02	0.40%	0.44%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-01	mg/kg	#######			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.30E-03	0.00E+00	0.00E+00	0.00E+00	9.30E-03	1.13E-01	8.23E-02	2.64E-01	3.52E-02	0.16%	0.37%
2,3,7,8-TCDD TEQ	9.44E-09	mg/L	1.41E-05	mg/kg	7.33E-05	mg/kg	#######	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	9.16E-10	9.73E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.12E-09	2.44E-09	2.12E-09	0.00E+00	0.00E+00	1.05E-07	1.00E-06	1.05E-01	1.00E-05	1.05E-02	0.20%	0.11%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	4.91E+02	mg/kg	#######			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	1.15E+00	2.00E-01	5.76E+00	3.00E-01	3.84E+00	11.19%	40.47%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	1.23E+00	mg/kg	#######			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-02	0.00E+00	0.00E+00	0.00E+00	2.50E-02	2.00E-01	1.25E-01	1.50E+00	1.67E-02	0.24%	0.18%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	2.40E+00	mg/kg	#######			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.17E-02	0.00E+00	0.00E+00	0.00E+00	4.17E-02	2.00E-01	2.09E-01	6.00E-01	6.95E-02	0.41%	0.73%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	6.15E-04	mg/kg	#######		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.61E-07	0.00E+00	0.00E+00	0.00E+00	3.61E-07	8.00E-01	4.51E-07	4.00E+00	9.02E-08	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	2.06E-03	mg/kg	#######		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.36E-06	0.00E+00	0.00E+00	0.00E+00	9.36E-06	8.00E-01	1.17E-05	4.00E+00	2.34E-06	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.85E-04	mg/kg	#######		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.67E-07	0.00E+00	0.00E+00	0.00E+00	1.67E-07	8.00E-01	2.09E-07	4.00E+00	4.18E-08	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.90E-04	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.57E-08	0.00E+00	0.00E+00	0.00E+00	8.57E-08	4.58E+00	1.87E-08	9.16E+00	9.36E-09	0.00%	0.00%
Aluminum	2.03E+01	mg/L	1.03E+04	mg/kg	9.02E+03	mg/kg	#######	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	1.97E+00	7.09E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.81E-01	1.52E-01	7.81E-01	0.00E+00	0.00E+00	7.46E+01	1.93E+00	3.86E+01	1.93E+01	3.86E+00	75.05%	40.71%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.57E+00	mg/kg	#######			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.32E-03	0.00E+00	0.00E+00	0.00E+00	1.32E-03	1.25E-01	1.05E-02	1.25E+00	1.05E-03	0.02%	0.01%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.34E-03	mg/kg	#######			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E-06	0.00E+00	0.00E+00	0.00E+00	4.00E-06	6.85E-02	5.84E-05	6.85E-01	5.84E-06	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.80E-01	0.00E+00	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	5.97E-03	mg/kg	#######		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.87E-07	0.00E+00	0.00E+00	0.00E+00	3.87E-07	6.80E-02	5.70E-06	6.80E-01	5.70E-07	0.00%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	2.66E-03	mg/kg	#######			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.86E-08	0.00E+00	0.00E+00	0.00E+00	8.86E-08	6.80E-02	1.30E-06	6.80E-01	1.30E-07	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.80E-01	0.00E+00	0.00%	0.00%
Barium	0.00E+00	mg/L	2.86E+02	mg/kg	1.01E+03	mg/kg	#######	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	1.98E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.70E+00	6.82E+00	8.70E+00	0.00E+00	0.00E+00	2.62E+01	5.10E+00	5.14E+00	1.98E+01	1.32E+00	9.97%	13.94%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.82E-01	mg/kg	0.00E+00	mg/kg	#######	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	0.00E+00	1.94E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.46E-05	0.00E+00	1.46E-05	0.00E+00	0.00E+00	1.97E-03	1.83E+01	1.08E-04	1.83E+02	1.08E-05	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	mg/L	1.83E-01	mg/kg	5.20E-01	mg/kg	#######	1.63E+03	7.99E+00	2.25E+01	1.33E+00	8.31E-01	1.33E+00	9.22E-01	9.22E-01	0.00E+00	1.26E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.02E-03	3.17E-03	8.02E-03	0.00E+00	0.00E+00	2.05E-02	1.00E+00	2.05E-02	1.00E+01	2.05E-03	0.04%	0.02%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Chromium	1.27E-02	mg/L	0.00E+00	mg/kg	1.61E+01	mg/kg	#######	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	1.23E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.65E-02	0.00E+00	0.00E+00	0.00E+00	5.78E-02	3.28E+00	1.76E-02	1.31E+01	4.40E-03	0.03%	0.05%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Copper	1.69E-02	mg/L	7.78E+00	mg/kg	1.37E+01	mg/kg	#######	5.92E+03	5.25E+00	8.28E-01	5.59E-01	3.96E-01	5.59E-01	1.49E-01	1.49E-01	1.64E-03	5.36E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.44E-01	3.98E-02	1.44E-01	0.00E+00	0.00E+00	3.82E-01	1.17E+01	3.27E-02	1.51E+01	2.52E-02	0.06%	0.27%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-02	0.00E+00	2.00E-01	0.00E+00	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	4.39E-04	mg/kg	#######			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.23E-07	0.00E+00	0.00E+00	0.00E+00	1.23E-07	9.20E-02	1.34E-06	9.20E-01	1.34E-07	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.10E-01	mg/kg	#######			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.90E-05	0.00E+00	0.00E+00	0.00E+00	2.90E-05	8.00E-02	3.63E-04	2.90E-01	1.00E-04	0.00%	0.00%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+00	mg/kg	#######			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.76E-02	0.00E+00	0.00E+00	0.00E+00	8.76E-02	1.00E+00	8.76E-02	5.00E+00	1.75E-02	0.17%	0.18%
Iron	2.91E+01	mg/L	0.00E+00	mg/kg	1.28E+04	mg/kg	#######	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	2.83E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.75E-01	0.00E+00	0.00E+00	0.00E+00	3.20E+00	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	7.24E-03	mg/L	0.00E+00	mg/kg	7.44E+01	mg/kg	#######	1.50E+03	6.07E-01	3.57E-01	NA	3.97E-02	NA	1.33E-02	1.33E-02	7.03E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	2.17E-02	NA	0.00E+00	0.00E+00	2.24E-02	8.00E+00	2.80E-03	8.00E+01	2.80E-04	0.01%	0.00%
Manganese	9.37E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	2.00E+03	2.10E+00	NA	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	9.10E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.10E-02	8.80E+01	1.03E-03	2.84E+02	3.20E-04	0.00%	0.00%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E-01	mg/kg	#######		2.87E+00	4.75E+00	NA	1.02E+00	NA	1.03E-01	1.03E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	8.18E-04	NA	0.00E+00	0.00E+00	8.18E-04	1.32E+01	6.20E-05	3.96E+01	2.07E-05	0.00%	0.00%
Mercury (methyl)	0.00E+00	mg/L	8.29E-02	mg/kg	0.00E+00	mg/kg	#######		2.87E+00	NA	1.16E+00	NA	1.16E+00			0.00E+00	5.71E-04	0.00E+00	0.00E+00	0.00E+00	NA	3.16E-03	NA	3.16E-03	0.00E+00	0.00E+00	6.90E-03	3.20E-02	2.16E-01	1.60E-01	4.31E-02	0.42%	0.45%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.52E-04	mg/kg	#######			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.87E-08	0.00E+00	0.00E+00	0.00E+00	8.87E-08	7.00E-02	1.27E-06	7.00E-01	1.27E-07	0.00%	0.00%
Nickel	0.00E+00	mg/L	1.10E+01	mg/kg	7.49E+00	mg/kg	#######		2.32E+00	4.73E+00	5.96E-02	6.57E-02	5.96E-02	1.01E-01	1.01E-01	0.00E+00	7.58E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.16E-02	3.60E-03	2.16E-02	0.00E+00	0.00E+00	1.23E-01	4.00E+01	3.07E-03	8.00E+01	1.53E-03	0.01%	0.02%
Nitrate	7.46E-01	mg/L	7.48E-01	mg/kg	1.08E+00	mg/kg	#######	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	7.24E-02	5.16E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.64E-03	2.76E-03	8.64E-03	0.00E+00	0.00E+00	9.76E-02	5.07E+02	1.93E-04	1.13E+03	8.64E-05	0.00%	0.00%
Nitrate/Nitrite	5.84E+01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	1.07E+03								5.67E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.67E+00	5.07E+02	1.12E-02	1.13E+03	5.02E-03	0.02%	0.05%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	3.51E-03	mg/kg	#######			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.86E-06	0.00E+00	0.00E+00	0.00E+00	4.86E-06	2.10E+00	2.31E-06	6.30E+00	7.71E-07	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	2.98E-04	mg/kg	#######			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.31E-08	0.00E+00	0.00E+00	0.00E+00	7.31E-08	2.40E-01	3.05E-07	2.40E+00	3.05E-08	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	1.32E-01	mg/kg	#######			1.14E+00	NA	2.56E+01	2.56E+01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	2.48E-02	0.00E+00	0.00E+00	0.00E+00	2.48E-02	8.50E+00	2.92E-03	2.55E+01	9.72E-04	0.01%	0.01%
Selenium	4.63E-03	mg/L	9.08E-01	mg/kg	6.76E-01	mg/kg	#######	2.05E+02	4.50E+00	1.03E+00	5.02E-01	4.87E-01	5.02E-01	1.95E-01	1.95E-01	4.49E-04	6.26E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.50E-02	2.41E-03	1.50E-02	0.00E+00	0.00E+00	3.92E-02	2.00E-01	1.96E-01	3.30E-01	1.19E-01	0.38%	1.25%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	3.28E+01	mg/kg	#######		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.41E-02	0.00E+00	0.00E+00	0.00E+00	8.41E-02	2.63E+02	3.20E-04	7.89E+02	1.07E-04	0.00%	0.00%
Sulfate	5.76E+01	mg/L	7.51E+01	mg/kg	1.04E+02	mg/kg	#######	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	5.59E+00	5.18E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.68E-01	2.67E-01	8.68E-01	0.00E+00	0.00E+00	8.11E+00	NA	NA	NA	NA	NA	NA
Thallium	7.55E-04	mg/L	6.00E-01	mg/kg	0.00E+00	mg/kg	#######	1.59E+04	4.50E+00							7.33E-05	4.13E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.21E-03	7.40E-03	5.68E-01	7.40E-02	5.68E-02	1.10%	0.60%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Vanadium	6.18E-02	mg/L	0.00E+00	mg/kg	2.15E+01	mg/kg	#######	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	6.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.29E-04	0.00E+00	0.00E+00	0.00E+00	6.63E-03	2.10E-01	3.16E-02	2.10E+00	3.16E-03	0.06%	0.03%
Zinc	0.00E+00	mg/L	3.58E+01	mg/kg	6.24E+01	mg/kg	#######	5.00E+03	7.53E+00	5.31E+00	1.01E+00	7.87E-01	1.01E+00	4.51E-01	4.51E-01	0.00E+00	2.47E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.19E+00	3.60E-01	1.19E+00	0.00E+00	0.00E+00	2.98E+00	1.60E+02	1.86E-02	3.20E+02	9.32E-03	0.04%	0.10%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	6.1E+00	3.9E+00	11.84%	41.38%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.9E-08	9.4E-09	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	1.2E-05	2.5E-06	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	6.5E-05	6.5E-06	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	1.1E-04	1.1E-05	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	1.3E-06	1.3E-07	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\,x\,Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0.1	unitless
Aquatic plant diet fraction =	0.45	unitless
Plant root diet fraction =	0.45	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0.008093	kg/d
Food ingestion rate =	0.0861	kg/d
Body weight =	1.174	kg
Home range =	0.11861	acres
Water intake rate =	0.114	L/d
Site Area =	475	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-194
Tier 2 COPCs
EEQs and Hazard Indices for the Muskrat at LHAAP
Waste Sub-Area/Harrison Bayou Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							-----	-----	-----	-----	Unitless	-----	-----	-----		mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	5.16E+00	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.13E-01	0.00E+00	0.00E+00	0.00E+00	2.13E-01	2.68E+00	7.93E-02	1.33E+01	1.60E-02	0.25%	0.37%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.49E-01	mg/kg	1.00E+00			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.85E-03	0.00E+00	0.00E+00	0.00E+00	4.85E-03	1.13E-01	4.29E-02	2.64E-01	1.84E-02	0.14%	0.43%
2,3,7,8-TCDD TEQ	8.00E-09	mg/L	4.00E-06	mg/kg	3.16E-05	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	7.77E-10	2.76E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.12E-10	8.99E-10	5.12E-10	0.00E+00	0.00E+00	3.03E-08	1.00E-06	3.03E-02	1.00E-05	3.03E-03	0.10%	0.07%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	2.47E+02	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.89E-01	0.00E+00	0.00E+00	0.00E+00	2.89E-01	2.00E-01	1.45E+00	3.00E-01	9.64E-01	4.60%	22.49%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	5.56E-01	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.68E-03	0.00E+00	0.00E+00	0.00E+00	8.68E-03	2.00E-01	4.34E-02	1.50E+00	5.79E-03	0.14%	0.13%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	1.24E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.94E-02	0.00E+00	0.00E+00	0.00E+00	1.94E-02	2.00E-01	9.71E-02	6.00E-01	3.24E-02	0.31%	0.75%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	4.55E-04	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.35E-08	0.00E+00	0.00E+00	0.00E+00	9.35E-08	8.00E-01	1.17E-07	4.00E+00	2.34E-08	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.48E-03	mg/kg	1.00E+00		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.47E-06	0.00E+00	0.00E+00	0.00E+00	1.47E-06	8.00E-01	1.84E-06	4.00E+00	3.68E-07	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.98E-04	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.07E-08	0.00E+00	0.00E+00	0.00E+00	4.07E-08	8.00E-01	5.09E-08	4.00E+00	1.02E-08	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.37E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.62E-08	0.00E+00	0.00E+00	0.00E+00	1.62E-08	4.58E+00	3.54E-09	9.16E+00	1.77E-09	0.00%	0.00%
Aluminum	1.12E+01	mg/L	7.50E+03	mg/kg	6.95E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	1.09E+00	5.17E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.71E-01	7.65E-02	3.71E-01	0.00E+00	0.00E+00	5.36E+01	1.93E+00	2.78E+01	1.93E+01	2.78E+00	88.46%	64.81%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.06E+00	mg/kg	1.00E+00			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.59E-04	0.00E+00	0.00E+00	0.00E+00	5.59E-04	1.25E-01	4.48E-03	1.25E+00	4.48E-04	0.01%	0.01%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.22E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.37E-07	0.00E+00	0.00E+00	0.00E+00	1.37E-07	6.85E-02	1.99E-06	6.85E-01	1.99E-07	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.80E-01	0.00E+00	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.21E-03	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E-07	0.00E+00	0.00E+00	0.00E+00	1.10E-07	6.80E-02	1.62E-06	6.80E-01	1.62E-07	0.00%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.94E-03	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.14E-09	0.00E+00	0.00E+00	0.00E+00	9.14E-09	6.80E-02	1.34E-07	6.80E-01	1.34E-08	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.80E-01	0.00E+00	0.00%	0.00%
Barium	0.00E+00	mg/L	2.32E+02	mg/kg	5.33E+02	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	1.60E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.19E+00	6.10E-01	1.19E+00	0.00E+00	0.00E+00	4.59E+00	5.10E+00	9.00E-01	1.98E+01	2.32E-01	2.87%	5.41%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.33E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	0.00E+00	1.60E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.21E-06	0.00E+00	4.21E-06	0.00E+00	0.00E+00	1.61E-03	1.83E+01	8.80E-05	1.83E+02	8.81E-06	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	mg/L	1.83E-01	mg/kg	4.73E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	2.35E+01	1.33E+00	8.67E-01	1.33E+00	6.72E-01	6.72E-01	0.00E+00	1.26E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.02E-03	3.00E-03	8.02E-03	0.00E+00	0.00E+00	2.03E-02	1.00E+00	2.03E-02	1.00E+01	2.03E-03	0.06%	0.05%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Chromium	9.95E-03	mg/L	0.00E+00	mg/kg	1.46E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	9.66E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.40E-03	0.00E+00	0.00E+00	0.00E+00	5.36E-03	3.28E+00	1.64E-03	1.31E+01	4.08E-04	0.01%	0.01%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Copper	1.19E-02	mg/L	6.82E+00	mg/kg	1.09E+01	mg/kg	1.00E+00	1.11E+03	1.56E+00	9.82E-01	6.06E-01	4.54E-01	6.06E-01	8.97E-02	8.97E-02	1.15E-03	4.70E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E-01	3.64E-02	1.36E-01	0.00E+00	0.00E+00	3.57E-01	1.17E+01	3.05E-02	1.51E+01	2.36E-02	0.10%	0.55%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-02	0.00E+00	2.00E-01	0.00E+00	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.17E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.37E-08	0.00E+00	0.00E+00	0.00E+00	6.37E-08	9.20E-02	6.93E-07	9.20E-01	6.93E-08	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.52E-01	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.77E-05	0.00E+00	0.00E+00	0.00E+00	1.77E-05	8.00E-02	2.22E-04	2.90E-01	6.11E-05	0.00%	0.00%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	1.03E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.35E-02	0.00E+00	0.00E+00	0.00E+00	6.35E-02	1.00E+00	6.35E-02	5.00E+00	1.27E-02	0.20%	0.30%
Iron	1.61E+01	mg/L	0.00E+00	mg/kg	1.12E+04	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	1.57E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.28E-01	0.00E+00	0.00E+00	0.00E+00	1.90E+00	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E-01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	5.66E-03	mg/L	0.00E+00	mg/kg	4.77E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	3.89E-01	NA	4.83E-02	NA	1.16E-02	1.16E-02	5.50E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	1.69E-02	NA	0.00E+00	0.00E+00	1.74E-02	8.00E+00	2.18E-03	8.00E+01	2.18E-04	0.01%	0.01%
Manganese	6.92E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.50E+02	4.20E-01	NA	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	6.72E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.72E-02	8.80E+01	7.63E-04	2.84E+02	2.36E-04	0.00%	0.01%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	9.02E-02	mg/kg	1.00E+00		1.14E+00	5.42E+00	NA	1.11E+00	NA	9.15E-02	9.15E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	7.36E-04	NA	0.00E+00	0.00E+00	7.36E-04	1.32E+01	5.57E-05	3.96E+01	1.86E-05	0.00%	0.00%
Mercury (methyl)	0.00E+00	mg/L	6.13E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	1.33E+00	NA	1.33E+00			0.00E+00	4.22E-04	0.00E+00	0.00E+00	0.00E+00	NA	2.69E-03	NA	2.69E-03	0.00E+00	0.00E+00	5.80E-03	3.20E-02	1.81E-01	1.60E-01	3.62E-02	0.58%	0.85%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.47E-04	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.23E-09	0.00E+00	0.00E+00	0.00E+00	6.23E-09	7.00E-02	8.90E-08	7.00E-01	8.90E-09	0.00%	0.00%
Nickel	0.00E+00	mg/L	9.70E+00	mg/kg	7.04E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	6.15E-02	6.67E-02	6.15E-02	8.71E-02	8.71E-02	0.00E+00	6.69E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.97E-02	3.44E-03	1.97E-02	0.00E+00	0.00E+00	1.10E-01	4.00E+01	2.74E-03	8.00E+01	1.37E-03	0.01%	0.03%
Nitrate	4.32E-01	mg/L	4.60E-01	mg/kg	6.12E-01	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	4.19E-02	3.17E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.19E-03	9.43E-04	3.19E-03	0.00E+00	0.00E+00	5.24E-02	5.07E+02	1.03E-04	1.13E+03	4.64E-05	0.00%	0.00%
Nitrate/Nitrite	2.93E+01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02								2.84E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.84E+00	5.07E+02	5.61E-03	1.13E+03	2.52E-03	0.02%	0.06%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	3.21E-03	mg/kg	1.00E+00			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.88E-06	0.00E+00	0.00E+00	0.00E+00	3.88E-06	2.10E+00	1.85E-06	6.30E+00	6.17E-07	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	2.24E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.51E-08	0.00E+00	0.00E+00	0.00E+00	4.51E-08	2.40E-01	1.88E-07	2.40E+00	1.88E-08	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	9.65E-02	mg/kg	1.00E+00			3.00E-01	NA	2.91E+01	2.91E+01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	2.06E-02	0.00E+00	0.00E+00	0.00E+00	2.06E-02	8.50E+00	2.42E-03	2.55E+01	8.08E-04	0.01%	0.02%
Selenium	3.90E-03	mg/L	7.65E-01	mg/kg	5.98E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.07E+00	4.93E-01	4.81E-01	4.93E-01	1.51E-01	1.51E-01	3.79E-04	5.27E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-02	2.11E-03	1.25E-02	0.00E+00	0.00E+00	3.27E-02	2.00E-01	1.63E-01	3.30E-01	9.90E-02	0.52%	2.31%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.45E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.77E-02	0.00E+00	0.00E+00	0.00E+00	3.77E-02	2.63E+02	1.43E-04	7.89E+02	4.78E-05	0.00%	0.00%
Sulfate	4.15E+01	mg/L	5.13E+01	mg/kg	4.14E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	4.03E+00	3.53E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.55E-01	6.38E-02	3.55E-01	0.00E+00	0.00E+00	5.16E+00	NA	NA	NA	NA	NA	NA
Thallium	5.86E-04	mg/L	4.92E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00							5.69E-05	3.39E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.45E-03	7.40E-03	4.66E-01	7.40E-02	4.66E-02	1.48%	1.09%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Vanadium	4.29E-02	mg/L	0.00E+00	mg/kg	1.89E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	4.16E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.99E-04	0.00E+00	0.00E+00	0.00E+00	4.66E-03	2.10E-01	2.22E-02	2.10E+00	2.22E-03	0.07%	0.05%
Zinc	0.00E+00	mg/L	3.15E+01	mg/kg	4.92E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	6.23E+00	1.06E+00	8.74E-01	1.06E+00	1.84E-01	1.84E-01	0.00E+00	2.17E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E+00	3.16E-01	1.11E+00	0.00E+00	0.00E+00	2.75E+00	1.60E+02	1.72E-02	3.20E+02	8.58E-03	0.05%	0.20%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	1.6E+00	1.0E+00	5.05%	23.38%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	3.5E-09	1.8E-09	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	2.0E-06	4.0E-07	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	3.8E-06	3.8E-07	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	8.8E-05	8.8E-06	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	6.9E-07	6.9E-08	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\,x\,Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0.1	unitless
Aquatic plant diet fraction =	0.45	unitless
Plant root diet fraction =	0.45	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0.008093	kg/d
Food ingestion rate =	0.0861	kg/d
Body weight =	1.174	kg
Home range =	0.33112	acres
Water intake rate =	0.114	L/d
Site Area =	475	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-195
Tier 1 COPCs
EEQs and Hazard Indices for the River Otter at LHAAP
Waste Sub-Area/Harrison Bayou Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
							Unitless								
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	8.46E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-01	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00
2,3,7,8-TCDD TEQ	9.44E-09	mg/L	1.41E-05	mg/kg	7.33E-05	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	4.91E+02	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	1.23E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	2.40E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	6.15E-04	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	2.06E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.85E-04	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.90E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Aluminum	2.03E+01	mg/L	1.03E+04	mg/kg	9.02E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.57E+00	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.34E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	5.97E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	2.66E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00
Barium	0.00E+00	mg/L	2.86E+02	mg/kg	1.01E+03	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.82E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00
Cadmium	0.00E+00	mg/L	1.83E-01	mg/kg	5.20E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.25E+01	1.33E+00	8.31E-01	8.31E-01	9.22E-01	9.22E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Chromium	1.27E-02	mg/L	0.00E+00	mg/kg	1.61E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Copper	1.69E-02	mg/L	7.78E+00	mg/kg	1.37E+01	mg/kg	1.00E+00	5.92E+03	5.25E+00	8.28E-01	5.59E-01	3.96E-01	3.96E-01	1.49E-01	1.49E-01
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	4.39E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.10E-01	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00
Iron	2.91E+01	mg/L	0.00E+00	mg/kg	1.28E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E-01	1.41E+01	1.41E+01		
Lead	7.24E-03	mg/L	0.00E+00	mg/kg	7.44E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	3.57E-01	NA	3.97E-02	3.97E-02	1.33E-02	1.33E-02
Manganese	9.37E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+03	2.10E+00	NA	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E-01	mg/kg	1.00E+00		2.87E+00	4.75E+00	NA	1.02E+00	1.02E+00	1.03E-01	1.03E-01
Mercury (methyl)	0.00E+00	mg/L	8.29E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.16E+00	NA	NA		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.52E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00
Nickel	0.00E+00	mg/L	1.10E+01	mg/kg	7.49E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	5.96E-02	6.57E-02	6.57E-02	1.01E-01	1.01E-01
Nitrate	7.46E-01	mg/L	7.48E-01	mg/kg	1.08E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Nitrate/Nitrite	5.84E+01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	3.51E-03	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	2.98E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	1.32E-01	mg/kg	1.00E+00			1.14E+00	NA	2.56E+01	2.56E+01	1.66E-01	1.66E-01
Selenium	4.63E-03	mg/L	9.08E-01	mg/kg	6.76E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.03E+00	5.02E-01	4.87E-01	4.87E-01	1.95E-01	1.95E-01
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	3.28E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Sulfate	5.76E+01	mg/L	7.51E+01	mg/kg	1.04E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Thallium	7.55E-04	mg/L	6.00E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Vanadium	6.18E-02	mg/L	0.00E+00	mg/kg	2.15E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03
Zinc	0.00E+00	mg/L	3.58E+01	mg/kg	6.24E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.31E+00	1.01E+00	7.87E-01	7.87E-01	4.51E-01	4.51E-01

Chemical	EED Surface Water (mg/kg-d)	EED Sediment (mg/kg-d)	EED Soil (mg/kg-d)	EED Fish (mg/kg-d)	EED Aq. Invert. (mg/kg-d)	EED Terr. Invert. (mg/kg-d)	EED Aq. Plants (mg/kg-d)	EED Terr. Plants (mg/kg-d)	EED Plant Roots (mg/kg-d)	EED Mammals (mg/kg-d)	EED Birds (mg/kg-d)	Total EED (mg/kg-d)	NOAEL (mg/kg-d)	EEQ N	LOAEL (mg/kg-d)	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.51E-02	1.51E-02	2.68E+00	5.63E-03	1.33E+01	1.13E-03	0.00%	0.01%
1,3-Dinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.24E-04	4.24E-04	1.13E-01	3.75E-03	2.64E-01	1.61E-03	0.00%	0.01%
2,3,7,8-TCDD TEQ	4.98E-10	5.68E-09	0.00E+00	4.47E-05	4.78E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.91E-09	4.52E-05	1.00E-06	4.52E+01	1.00E-05	4.52E+00	30.04%	23.52%
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.76E-01	8.76E-01	2.00E-01	4.38E+00	3.00E-01	2.92E+00	2.91%	15.19%
2,4-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.19E-03	2.19E-03	2.00E-01	1.10E-02	1.50E+00	1.46E-03	0.01%	0.01%
2,6-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.29E-03	4.29E-03	2.00E-01	2.14E-02	6.00E-01	7.14E-03	0.01%	0.04%
4,4'-DDD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E-06	1.10E-06	8.00E-01	1.37E-06	4.00E+00	2.74E-07	0.00%	0.00%
4,4'-DDE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.17E-06	3.17E-06	8.00E-01	3.96E-06	4.00E+00	7.91E-07	0.00%	0.00%
4,4'-DDT	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.34E-07	7.34E-07	8.00E-01	9.17E-07	4.00E+00	1.83E-07	0.00%	0.00%
Aldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
alpha-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.17E-07	5.17E-07	4.58E+00	1.13E-07	9.16E+00	5.64E-08	0.00%	0.00%
Aluminum	1.07E+00	4.14E+00	0.00E+00	2.43E+00	7.16E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.21E-01	7.94E+01	1.93E+00	4.11E+01	1.93E+01	4.11E+00	27.35%	21.41%
Antimony	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.60E-04	6.60E-04	1.25E-01	5.28E-03	1.25E+00	5.28E-04	0.00%	0.00%
Aroclor 1242	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.96E-06	5.96E-06	6.85E-02	8.70E-05	6.85E-01	8.70E-06	0.00%	0.00%
Aroclor 1248	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.90E-01	0.00E+00	0.00%	0.00%
Aroclor 1254	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.81E-06	9.81E-06	6.80E-02	1.44E-04	6.90E-01	1.42E-05	0.00%	0.00%
Aroclor 1260	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.89E-06	7.89E-06	6.80E-02	1.16E-04	6.90E-01	1.14E-05	0.00%	0.00%
Aroclor 1268	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.90E-01	0.00E+00	0.00%	0.00%
Barium	0.00E+00	1.15E-01	0.00E+00	0.00E+00	2.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.18E-02	2.16E+00	5.10E+00	4.24E-01	1.98E+01	1.09E-01	0.28%	0.57%
Benzoic Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	1.13E-04	0.00E+00	0.00E+00	9.54E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.66E-03	1.83E+01	5.27E-04	1.83E+02	5.28E-05	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	7.36E-05	0.00E+00	0.00E+00	2.26E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.42E-04	3.08E-03	1.00E+00	3.08E-03	1.00E+01	3.08E-04	0.00%	0.00%
Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Chromium	6.69E-04	0.00E+00	0.00E+00	3.53E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.28E-03	3.62E-01	3.28E+00	1.10E-01	1.31E+01	2.75E-02	0.07%	0.14%
cis-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Copper	8.92E-04	3.13E-03	0.00E+00	2.78E+00	6.32E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.17E-03	2.85E+00	1.17E+01	2.44E-01	1.51E+01	1.89E-01	0.16%	0.98%
Dieldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-02	0.00E+00	2.00E-01	0.00E+00	0.00%	0.00%
Endrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.26E-07	8.26E-07	9.20E-02	8.98E-06	9.20E-01	8.98E-07	0.00%	0.00%
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.74E-04	3.74E-04	8.00E-02	4.67E-03	2.90E-01	1.29E-03	0.00%	0.01%
HMX	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.54E-03	2.54E-03	1.00E+00	2.54E-03	5.00E+00	5.08E-04	0.00%	0.00%
Iron	1.54E+00	0.00E+00	0.00E+00	8.11E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.10E-02	8.12E+02	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	3.82E-04	0.00E+00	0.00E+00	3.03E-01	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	1.53E-03	3.05E-01	8.00E+00	3.81E-02	8.00E+01	3.81E-03	0.03%	0.02%
Manganese	4.95E-02	0.00E+00	0.00E+00	5.22E+01	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.22E+01	8.80E+01	5.94E-01	2.84E+02	1.84E-01	0.39%	0.96%
Mercury (inorganic)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	1.75E-05	1.75E-05	1.00E+00	1.75E-05	3.00E+00	5.83E-06	0.00%	0.00%
Mercury (methyl)	0.00E+00	3.34E-05	0.00E+00	0.00E+00	3.68E-04	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	4.01E-04	1.50E-02	2.68E-02	2.50E-02	1.61E-02	0.02%	0.08%
Mirex	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.27E-07	6.27E-07	7.00E-02	8.96E-06	7.00E-01	8.96E-07	0.00%	0.00%
Nickel	0.00E+00	4.42E-03	0.00E+00	0.00E+00	3.95E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E-03	4.51E-02	4.00E+01	1.13E-03	8.00E+01	5.63E-04	0.00%	0.00%
Nitrate	3.94E-02	3.01E-04	0.00E+00	2.22E+01	2.43E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.76E-04	2.22E+01	5.07E+02	4.38E-02	1.13E+03	1.97E-02	0.03%	0.10%
Nitrate/Nitrite	3.08E+00	0.00E+00	0.00E+00	1.74E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E+03	5.07E+02	3.43E+00	1.13E+03	1.54E+00	2.28%	8.02%
Oxychlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.26E-06	6.26E-06	2.10E+00	2.98E-06	6.30E+00	9.94E-07	0.00%	0.00%
Pentachloroanisole	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.31E-07	5.31E-07	2.40E-01	2.21E-06	2.40E+00	2.21E-07	0.00%	0.00%
Pentachlorophenol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	3.40E-05	3.40E-05	8.50E+00	4.00E-06	2.55E+01	1.33E-06	0.00%	0.00%
Selenium	2.44E-04	3.65E-04	0.00E+00	2.64E-02	6.32E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.04E-04	3.35E-02	2.00E-01	1.68E-01	3.30E-01	1.02E-01	0.11%	0.53%
Silver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.43E-03	8.43E-03	2.63E+02	3.21E-05	7.89E+02	1.07E-05	0.00%	0.00%
Sulfate	3.04E+00	3.02E-02	0.00E+00	1.71E+03	2.44E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.67E-02	1.72E+03	NA	NA	NA	NA	NA	NA
Thallium	3.98E-05	2.41E-04	0.00E+00	3.34E-01	4.17E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.39E-01	7.40E-03	4.58E+01	7.40E-02	4.58E+00	30.45%	23.83%
trans-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Vanadium	3.26E-03	0.00E+00	0.00E+00	1.84E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.97E-04	1.84E+00	2.10E-01	8.77E+00	2.10E+00	8.77E-01	5.83%	4.57%
Zinc	0.00E+00	1.44E-02	0.00E+00	0.00E+00	4.17E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.35E-02	4.75E-01	1.60E+02	2.97E-03	3.20E+02	1.48E-03	0.00%	0.01%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	4.4E+00	2.9E+00	2.93%	15.24%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.1E-07	5.6E-08	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	6.2E-06	1.2E-06	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	3.5E-04	3.4E-05	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	5.3E-04	5.3E-05	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	9.0E-06	9.0E-07	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.9	unitless
Aq. Invert diet fraction =	0.05	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0.05	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0.00494	kg/d
Food ingestion rate =	0.38	kg/d
Body weight =	8	kg
Home range =	729	acres
Water intake rate =	0.648	L/d
Site Area =	475	acres
Area Use Factor (AUF) =	0.651578	unitless
Exposure Duration (ED) =	1	unitless

Table E-196
Tier 2 COPCs
EEQs and Hazard Indices for the River Otter at LHAAP
Waste Sub-Area/Harrison Bayou Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							----------------Unitless							-----------------		mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	5.16E+00	mg/kg	#######			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.16E-03	5.16E-03	2.68E+00	1.93E-03	1.33E+01	3.88E-04	0.01%	0.01%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.49E-01	mg/kg	#######			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.49E-04	1.49E-04	1.13E-01	1.32E-03	2.64E-01	5.66E-04	0.00%	0.01%
2,3,7,8-TCDD TEQ	8.00E-09	mg/L	4.00E-06	mg/kg	3.16E-05	mg/kg	#######	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02	3.12E-10	1.19E-09	0.00E+00	3.80E-06	2.13E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.71E-09	3.82E-06	1.00E-06	3.82E+00	1.00E-05	3.82E-01	12.93%	9.77%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	2.47E+02	mg/kg	#######			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.47E-01	2.47E-01	2.00E-01	1.24E+00	3.00E-01	8.25E-01	4.19%	21.10%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	5.56E-01	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.56E-04	5.56E-04	2.00E-01	2.78E-03	1.50E+00	3.71E-04	0.01%	0.01%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	1.24E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.24E-03	1.24E-03	2.00E-01	6.22E-03	6.00E-01	2.07E-03	0.02%	0.05%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	4.55E-04	mg/kg	#######		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.56E-07	4.56E-07	8.00E-01	5.70E-07	4.00E+00	1.14E-07	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.48E-03	mg/kg	#######		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E-06	1.59E-06	8.00E-01	1.98E-06	4.00E+00	3.97E-07	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.98E-04	mg/kg	#######		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.01E-07	2.01E-07	8.00E-01	2.51E-07	4.00E+00	5.02E-08	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.37E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.37E-07	2.37E-07	4.58E+00	5.17E-08	9.16E+00	2.59E-08	0.00%	0.00%
Aluminum	1.12E+01	mg/L	7.50E+03	mg/kg	6.95E+03	mg/kg	#######	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03	4.37E-01	2.23E+00	0.00E+00	9.92E-01	3.85E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.26E-02	4.22E+01	1.93E+00	2.19E+01	1.93E+01	2.19E+00	74.10%	56.00%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.06E+00	mg/kg	#######			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.61E-04	2.61E-04	1.25E-01	2.09E-03	1.25E+00	2.09E-04	0.01%	0.01%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.22E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.22E-06	2.22E-06	6.85E-02	3.25E-05	6.85E-01	3.25E-06	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.90E-01	0.00E+00	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.21E-03	mg/kg	#######		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.39E-06	2.39E-06	6.80E-02	3.52E-05	6.90E-01	3.47E-06	0.00%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.94E-03	mg/kg	#######			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.70E-06	3.70E-06	6.80E-02	5.44E-05	6.90E-01	5.36E-06	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.90E-01	0.00E+00	0.00%	0.00%
Barium	0.00E+00	mg/L	2.32E+02	mg/kg	5.33E+02	mg/kg	#######	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02	0.00E+00	6.87E-02	0.00E+00	0.00E+00	1.19E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.22E-02	1.27E+00	5.10E+00	2.49E-01	1.98E+01	6.42E-02	0.84%	1.64%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.33E-01	mg/kg	0.00E+00	mg/kg	#######	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01	0.00E+00	6.91E-05	0.00E+00	0.00E+00	1.24E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.31E-03	1.83E+01	7.14E-05	1.83E+02	7.16E-06	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	mg/L	1.83E-01	mg/kg	4.73E-01	mg/kg	#######	1.15E+03	6.00E-01	2.35E+01	1.33E+00	8.67E-01	8.67E-01	6.72E-01	6.72E-01	0.00E+00	5.43E-05	0.00E+00	0.00E+00	1.25E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.63E-04	5.42E-04	1.00E+00	5.42E-04	1.00E+01	5.42E-05	0.00%	0.00%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Chromium	9.95E-03	mg/L	0.00E+00	mg/kg	1.46E+01	mg/kg	#######	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02	3.87E-04	0.00E+00	0.00E+00	7.36E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.41E-03	7.54E-02	3.28E+00	2.30E-02	1.31E+01	5.74E-03	0.08%	0.15%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Copper	1.19E-02	mg/L	6.82E+00	mg/kg	1.09E+01	mg/kg	#######	1.11E+03	1.56E+00	9.82E-01	6.06E-01	4.54E-01	4.54E-01	8.97E-02	8.97E-02	4.62E-04	2.02E-03	0.00E+00	2.71E-01	1.21E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.12E-03	2.87E-01	1.17E+01	2.45E-02	1.51E+01	1.89E-02	0.08%	0.48%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-02	0.00E+00	2.00E-01	0.00E+00	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.17E-04	mg/kg	#######			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.39E-07	4.39E-07	9.20E-02	4.78E-06	9.20E-01	4.78E-07	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.52E-01	mg/kg	#######			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E-04	1.52E-04	8.00E-02	1.90E-03	2.90E-01	5.25E-04	0.01%	0.01%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	1.03E+00	mg/kg	#######			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.03E-03	1.03E-03	1.00E+00	1.03E-03	5.00E+00	2.07E-04	0.00%	0.01%
Iron	1.61E+01	mg/L	0.00E+00	mg/kg	1.12E+04	mg/kg	#######	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03	6.29E-01	0.00E+00	0.00E+00	8.29E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.25E-02	8.36E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.67E+00		1.39E+01	1.39E+01	1.39E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	5.66E-03	mg/L	0.00E+00	mg/kg	4.77E+01	mg/kg	#######	4.48E+02	7.10E-02	3.89E-01	NA	4.83E-02	4.83E-02	1.16E-02	1.16E-02	2.20E-04	0.00E+00	0.00E+00	5.21E-02	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	6.34E-04	5.30E-02	8.00E+00	6.62E-03	8.00E+01	6.62E-04	0.02%	0.02%
Manganese	6.92E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	2.50E+02	4.20E-01	NA	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03	2.69E-02	0.00E+00	0.00E+00	3.55E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.58E+00	8.80E+01	4.07E-02	2.84E+02	1.26E-02	0.14%	0.32%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	9.02E-02	mg/kg	#######		1.14E+00	5.42E+00	NA	1.11E+00	1.11E+00	9.15E-02	9.15E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	9.42E-06	9.42E-06	1.00E+00	9.42E-06	3.00E+00	3.14E-06	0.00%	0.00%
Mercury (methyl)	0.00E+00	mg/L	6.13E-02	mg/kg	0.00E+00	mg/kg	#######		1.14E+00	NA	1.33E+00	NA	NA			0.00E+00	1.82E-05	0.00E+00	0.00E+00	7.94E-05	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	9.76E-05	1.50E-02	6.51E-03	2.50E-02	3.91E-03	0.02%	0.10%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.47E-04	mg/kg	#######			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.47E-07	2.47E-07	7.00E-02	3.53E-06	7.00E-01	3.53E-07	0.00%	0.00%
Nickel	0.00E+00	mg/L	9.70E+00	mg/kg	7.04E+00	mg/kg	#######		4.86E-01	1.06E+00	6.15E-02	6.67E-02	6.67E-02	8.71E-02	8.71E-02	0.00E+00	2.88E-03	0.00E+00	0.00E+00	5.38E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-04	8.96E-03	4.00E+01	2.24E-04	8.00E+01	1.12E-04	0.00%	0.00%
Nitrate	4.32E-01	mg/L	4.60E-01	mg/kg	6.12E-01	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	1.68E-02	1.37E-04	0.00E+00	2.67E+00	2.21E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.74E-05	2.69E+00	5.07E+02	5.30E-03	1.13E+03	2.38E-03	0.02%	0.06%
Nitrate/Nitrite	2.93E+01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	3.01E+02								1.14E+00	0.00E+00	0.00E+00	1.81E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.82E+02	5.07E+02	3.59E-01	1.13E+03	1.61E-01	1.22%	4.13%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	3.21E-03	mg/kg	#######			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.21E-06	3.21E-06	2.10E+00	1.53E-06	6.30E+00	5.09E-07	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	2.24E-04	mg/kg	#######			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.25E-07	2.25E-07	2.40E-01	9.36E-07	2.40E+00	9.36E-08	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	9.65E-02	mg/kg	#######			3.00E-01	NA	2.91E+01	2.91E+01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	1.22E-05	1.22E-05	8.50E+00	1.44E-06	2.55E+01	4.79E-07	0.00%	0.00%
Selenium	3.90E-03	mg/L	7.65E-01	mg/kg	5.98E-01	mg/kg	#######	2.05E+02	4.50E+00	1.07E+00	4.93E-01	4.81E-01	4.81E-01	1.51E-01	1.51E-01	1.52E-04	2.27E-04	0.00E+00	1.64E-02	3.93E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.03E-04	2.09E-02	2.00E-01	1.04E-01	3.30E-01	6.32E-02	0.35%	1.62%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.50E+00		1.40E-02	1.40E-02	1.40E-02			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.45E+01	mg/kg	#######		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.10E-03	3.10E-03	2.63E+02	1.18E-05	7.89E+02	3.93E-06	0.00%	0.00%
Sulfate	4.15E+01	mg/L	5.13E+01	mg/kg	4.14E+01	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01	1.62E+00	1.52E-02	0.00E+00	2.56E+02	2.46E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.24E-03	2.58E+02	NA	NA	NA	NA	NA	NA
Thallium	5.86E-04	mg/L	4.92E-01	mg/kg	0.00E+00	mg/kg	#######	7.50E+01	4.50E+00							2.28E-05	1.46E-04	0.00E+00	9.03E-04	2.53E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.60E-03	7.40E-03	4.86E-01	7.40E-02	4.86E-02	1.65%	1.24%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Vanadium	4.29E-02	mg/L	0.00E+00	mg/kg	1.89E+01	mg/kg	#######	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03	1.67E-03	0.00E+00	0.00E+00	2.65E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.19E-04	2.67E-01	2.10E-01	1.27E+00	2.10E+00	1.27E-01	4.30%	3.25%
Zinc	0.00E+00	mg/L	3.15E+01	mg/kg	4.92E+01	mg/kg	#######	2.91E+03	1.94E+00	6.23E+00	1.06E+00	8.74E-01	8.74E-01	1.84E-01	1.84E-01	0.00E+00	9.37E-03	0.00E+00	0.00E+00	6.97E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.03E-02	8.94E-02	1.60E+02	5.59E-04	3.20E+02	2.80E-04	0.00%	0.01%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	1.2E+00	8.3E-01	4.22%	21.16%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	5.2E-08	2.6E-08	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	2.8E-06	5.6E-07	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.2E-04	1.2E-05	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	7.1E-05	7.2E-06	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	4.8E-06	4.8E-07	0.00%	0.00%

Intake Equation:

$$E_j = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi \, x \, Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rates, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.9	unitless
Aq. Invert diet fraction =	0.05	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0.05	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0.00494	kg/d
Food ingestion rate =	0.38	kg/d
Body weight =	8	kg
Home range =	988	acres
Water intake rate =	0.648	L/d
Site Area =	475	acres
Area Use Factor (AUF) =	0.480769	unitless
Exposure Duration (ED) =	1	unitless

Table E-197
Tier 1 COPCs
EEQs and Hazard Indices for the Townsend's Big-Eared Bat at LHAAP
Waste Sub-Area/Harrison Bayou Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL		LOAEL		Percent Contribution to	Percent Contribution to
							------	------	------	------	------Unitless------	------	------	------	------	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	EEQ N	mg/kg-d	EEQ L	EEQ N	EEQ L
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	8.46E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	0.00E+00	0.00E+00	0.00E+00	2.10E+00	2.68E+00	7.85E-01	1.33E+01	1.58E-01	2.55%	0.95%
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-01	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.52E-02	0.00E+00	0.00E+00	0.00E+00	3.52E-02	1.13E-01	3.12E-01	2.64E-01	1.33E-01	1.01%	0.80%
2,3,7,8-TCDD TEQ	9.44E-09	mg/L	1.41E-05	mg/kg	7.33E-05	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	5.53E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.25E-09	0.00E+00	0.00E+00	0.00E+00	9.81E-09	1.00E-06	9.81E-03	1.00E-05	9.81E-04	0.03%	0.01%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	4.91E+02	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.36E+00	0.00E+00	0.00E+00	0.00E+00	4.36E+00	2.00E-01	2.18E+01	3.00E-01	1.45E+01	70.95%	87.08%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	1.23E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.48E-02	0.00E+00	0.00E+00	0.00E+00	9.48E-02	2.00E-01	4.74E-01	1.50E+00	6.32E-02	1.54%	0.38%
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	2.40E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.58E-01	0.00E+00	0.00E+00	0.00E+00	1.58E-01	2.00E-01	7.90E-01	6.00E-01	2.63E-01	2.57%	1.58%
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	6.15E-04	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.37E-06	0.00E+00	0.00E+00	0.00E+00	1.37E-06	8.00E-01	1.71E-06	4.00E+00	3.42E-07	0.00%	0.00%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	2.06E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-05	0.00E+00	0.00E+00	0.00E+00	3.54E-05	8.00E-01	4.43E-05	4.00E+00	8.86E-06	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.85E-04	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.34E-07	0.00E+00	0.00E+00	0.00E+00	6.34E-07	8.00E-01	7.92E-07	4.00E+00	1.58E-07	0.00%	0.00%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.90E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.24E-07	0.00E+00	0.00E+00	0.00E+00	3.24E-07	4.58E+00	7.08E-08	9.16E+00	3.54E-08	0.00%	0.00%
Aluminum	2.03E+01	mg/L	1.03E+04	mg/kg	9.02E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	1.19E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.76E-01	0.00E+00	0.00E+00	0.00E+00	1.77E+00	1.93E+00	9.15E-01	1.93E+01	9.15E-02	2.98%	0.55%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.57E+00	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.99E-03	0.00E+00	0.00E+00	0.00E+00	4.99E-03	1.25E-01	3.99E-02	1.25E+00	3.99E-03	0.13%	0.02%
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.34E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.51E-05	0.00E+00	0.00E+00	0.00E+00	1.51E-05	6.85E-02	2.21E-04	6.85E-01	2.21E-05	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.80E-01	0.00E+00	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	5.97E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.47E-06	0.00E+00	0.00E+00	0.00E+00	1.47E-06	6.80E-02	2.16E-05	6.80E-01	2.16E-06	0.00%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	2.66E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.35E-07	0.00E+00	0.00E+00	0.00E+00	3.35E-07	6.80E-02	4.93E-06	6.80E-01	4.93E-07	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.80E-01	0.00E+00	0.00%	0.00%
Barium	0.00E+00	mg/L	2.86E+02	mg/kg	1.01E+03	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.58E+01	0.00E+00	0.00E+00	0.00E+00	2.58E+01	5.10E+00	5.06E+00	1.98E+01	1.30E+00	16.47%	7.81%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.82E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	mg/L	1.83E-01	mg/kg	5.20E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.25E+01	1.33E+00	8.31E-01	8.31E-01	9.22E-01	9.22E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E-02	0.00E+00	0.00E+00	0.00E+00	1.20E-02	1.00E+00	1.20E-02	1.00E+01	1.20E-03	0.04%	0.01%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Chromium	1.27E-02	mg/L	0.00E+00	mg/kg	1.61E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	7.42E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E-01	0.00E+00	0.00E+00	0.00E+00	2.15E-01	3.28E+00	6.55E-02	1.31E+01	1.63E-02	0.21%	0.10%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Copper	1.69E-02	mg/L	7.78E+00	mg/kg	1.37E+01	mg/kg	1.00E+00	5.92E+03	5.25E+00	8.28E-01	5.59E-01	3.96E-01	3.96E-01	1.49E-01	1.49E-01	9.90E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.51E-01	0.00E+00	0.00E+00	0.00E+00	1.52E-01	1.17E+01	1.30E-02	1.51E+01	1.00E-02	0.04%	0.06%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-02	0.00E+00	2.00E-01	0.00E+00	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	4.39E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.65E-07	0.00E+00	0.00E+00	0.00E+00	4.65E-07	9.20E-02	5.06E-06	9.20E-01	5.06E-07	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.10E-01	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E-04	0.00E+00	0.00E+00	0.00E+00	1.10E-04	8.00E-02	1.37E-03	2.90E-01	3.79E-04	0.00%	0.00%
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.32E-01	0.00E+00	0.00E+00	0.00E+00	3.32E-01	1.00E+00	3.32E-01	5.00E+00	6.63E-02	1.08%	0.40%
Iron	2.91E+01	mg/L	0.00E+00	mg/kg	1.28E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	1.70E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E+00	0.00E+00	0.00E+00	0.00E+00	3.13E+00	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	7.24E-03	mg/L	0.00E+00	mg/kg	7.44E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	3.57E-01	NA	3.97E-02	3.97E-02	1.33E-02	1.33E-02	4.24E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	8.20E-02	0.00E+00	0.00E+00	0.00E+00	8.24E-02	8.00E+00	1.03E-02	8.00E+01	1.03E-03	0.03%	0.01%
Manganese	9.37E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+03	2.10E+00	NA	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	5.49E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.49E-02	8.80E+01	6.24E-04	2.84E+02	1.93E-04	0.00%	0.00%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E-01	mg/kg	1.00E+00		2.87E+00	4.75E+00	NA	1.02E+00	1.02E+00	1.03E-01	1.03E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	3.10E-03	0.00E+00	0.00E+00	0.00E+00	3.10E-03	1.32E+01	2.35E-04	3.96E+01	7.82E-05	0.00%	0.00%
Mercury (methyl)	0.00E+00	mg/L	8.29E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.16E+00	NA	NA			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	3.20E-02	0.00E+00	1.60E-01	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.52E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.36E-07	0.00E+00	0.00E+00	0.00E+00	3.36E-07	7.00E-02	4.80E-06	7.00E-01	4.80E-07	0.00%	0.00%
Nickel	0.00E+00	mg/L	1.10E+01	mg/kg	7.49E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	5.96E-02	6.57E-02	6.57E-02	1.01E-01	1.01E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E-02	0.00E+00	0.00E+00	0.00E+00	1.36E-02	4.00E+01	3.41E-04	8.00E+01	1.71E-04	0.00%	0.00%
Nitrate	7.46E-01	mg/L	7.48E-01	mg/kg	1.08E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	4.37E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.04E-02	0.00E+00	0.00E+00	0.00E+00	5.41E-02	5.07E+02	1.07E-04	1.13E+03	4.79E-05	0.00%	0.00%
Nitrate/Nitrite	5.84E+01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03								3.42E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.42E+00	5.07E+02	6.75E-03	1.13E+03	3.03E-03	0.02%	0.02%
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	3.51E-03	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.84E-05	0.00E+00	0.00E+00	0.00E+00	1.84E-05	2.10E+00	8.76E-06	6.30E+00	2.92E-06	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	2.98E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.77E-07	0.00E+00	0.00E+00	0.00E+00	2.77E-07	2.40E-01	1.15E-06	2.40E+00	1.15E-07	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	1.32E-01	mg/kg	1.00E+00			1.14E+00	NA	2.56E+01	2.56E+01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	9.38E-02	0.00E+00	0.00E+00	0.00E+00	9.38E-02	8.50E+00	1.10E-02	2.55E+01	3.68E-03	0.04%	0.02%
Selenium	4.63E-03	mg/L	9.08E-01	mg/kg	6.76E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.03E+00	5.02E-01	4.87E-01	4.87E-01	1.95E-01	1.95E-01	2.71E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.14E-03	0.00E+00	0.00E+00	0.00E+00	9.41E-03	2.00E-01	4.71E-02	3.30E-01	2.85E-02	0.15%	0.17%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	3.28E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.19E-01	0.00E+00	0.00E+00	0.00E+00	3.19E-01	2.63E+02	1.21E-03	7.89E+02	4.04E-04	0.00%	0.00%
Sulfate	5.76E+01	mg/L	7.51E+01	mg/kg	1.04E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	3.37E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.01E+00	0.00E+00	0.00E+00	0.00E+00	4.38E+00	NA	NA	NA	NA	NA	NA
Thallium	7.55E-04	mg/L	6.00E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00							4.42E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.42E-05	7.40E-03	5.98E-03	7.40E-02	5.98E-04	0.02%	0.00%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Vanadium	6.18E-02	mg/L	0.00E+00	mg/kg	2.15E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	3.62E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.38E-03	0.00E+00	0.00E+00	0.00E+00	6.00E-03	2.10E-01	2.86E-02	2.10E+00	2.86E-03	0.09%	0.02%
Zinc	0.00E+00	mg/L	3.58E+01	mg/kg	6.24E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.31E+00	1.01E+00	7.87E-01	7.87E-01	4.51E-01	4.51E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E+00	0.00E+00	0.00E+00	0.00E+00	1.36E+00	1.60E+02	8.53E-03	3.20E+02	4.27E-03	0.03%	0.03%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	2.3E+01	1.5E+01	75.06%	89.03%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	7.1E-08	3.5E-08	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	4.7E-05	9.4E-06	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	2.5E-04	2.5E-05	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	5.1E-06	5.1E-07	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text tables.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	1	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.000711	kg/d
Body weight =	0.0095	kg
Home range =	1310	acres
Water intake rate =	0.0015	L/d
Site Area =	486	acres
Area Use Factor (AUF) =	0.370992	unitless
Exposure Duration (ED) =	1	unitless

Table E-198
Tier 2 COPCs
EEQs and Hazard Indices for the Townsend's Big-Eared Bat at LHAAP
Waste Sub-Area/Harrison Bayou Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
									-------	-------	-------Unitless	-------	-------	-------	
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	5.16E+00	mg/kg	#######			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.49E-01	mg/kg	#######			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01
2,3,7,8-TCDD TEQ	8.00E-09	mg/L	4.00E-06	mg/kg	3.16E-05	mg/kg	#######	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	2.47E+02	mg/kg	#######			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	5.56E-01	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	1.24E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	4.55E-04	mg/kg	#######		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.48E-03	mg/kg	#######		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.98E-04	mg/kg	#######		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.37E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Aluminum	1.12E+01	mg/L	7.50E+03	mg/kg	6.95E+03	mg/kg	#######	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.06E+00	mg/kg	#######			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.22E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.21E-03	mg/kg	#######		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.94E-03	mg/kg	#######			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01
Barium	0.00E+00	mg/L	2.32E+02	mg/kg	5.33E+02	mg/kg	#######	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.33E-01	mg/kg	0.00E+00	mg/kg	#######	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01
Cadmium	0.00E+00	mg/L	1.83E-01	mg/kg	4.73E-01	mg/kg	#######	1.15E+03	6.00E-01	2.35E+01	1.33E+00	8.67E-01	8.67E-01	6.72E-01	6.72E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Chromium	9.95E-03	mg/L	0.00E+00	mg/kg	1.46E+01	mg/kg	#######	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Copper	1.19E-02	mg/L	6.82E+00	mg/kg	1.09E+01	mg/kg	#######	1.11E+03	1.56E+00	9.82E-01	6.06E-01	4.54E-01	4.54E-01	8.97E-02	8.97E-02
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.17E-04	mg/kg	#######			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.52E-01	mg/kg	#######			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	1.03E+00	mg/kg	#######			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01
Iron	1.61E+01	mg/L	0.00E+00	mg/kg	1.12E+04	mg/kg	#######	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.67E+00		1.39E+01	1.39E+01	1.39E+01		
Lead	5.66E-03	mg/L	0.00E+00	mg/kg	4.77E+01	mg/kg	#######	4.48E+02	7.10E-02	3.89E-01	NA	4.83E-02	4.83E-02	1.16E-02	1.16E-02
Manganese	6.92E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	2.50E+02	4.20E-01	NA	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	9.02E-02	mg/kg	#######		1.14E+00	5.42E+00	NA	1.11E+00	1.11E+00	9.15E-02	9.15E-02
Mercury (methyl)	0.00E+00	mg/L	6.13E-02	mg/kg	0.00E+00	mg/kg	#######		1.14E+00	NA	1.33E+00	NA	NA		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.47E-04	mg/kg	#######			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01
Nickel	0.00E+00	mg/L	9.70E+00	mg/kg	7.04E+00	mg/kg	#######		4.86E-01	1.06E+00	6.15E-02	6.67E-02	6.67E-02	8.71E-02	8.71E-02
Nitrate	4.32E-01	mg/L	4.60E-01	mg/kg	6.12E-01	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Nitrate/Nitrite	2.93E+01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	3.01E+02							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	3.21E-03	mg/kg	#######			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	2.24E-04	mg/kg	#######			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	9.65E-02	mg/kg	#######			3.00E-01	NA	2.91E+01	2.91E+01	1.11E-01	1.11E-01
Selenium	3.90E-03	mg/L	7.65E-01	mg/kg	5.98E-01	mg/kg	#######	2.05E+02	4.50E+00	1.07E+00	4.93E-01	4.81E-01	4.81E-01	1.51E-01	1.51E-01
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.50E+00		1.40E-02	1.40E-02	1.40E-02		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.45E+01	mg/kg	#######		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Sulfate	4.15E+01	mg/L	5.13E+01	mg/kg	4.14E+01	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Thallium	5.86E-04	mg/L	4.92E-01	mg/kg	0.00E+00	mg/kg	#######	7.50E+01	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Vanadium	4.29E-02	mg/L	0.00E+00	mg/kg	1.89E+01	mg/kg	#######	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03
Zinc	0.00E+00	mg/L	3.15E+01	mg/kg	4.92E+01	mg/kg	#######	2.91E+03	1.94E+00	6.23E+00	1.06E+00	8.74E-01	8.74E-01	1.84E-01	1.84E-01

Chemical	EED Surface Water (mg/kg-d)	EED Sediment (mg/kg-d)	EED Soil (mg/kg-d)	EED Fish (mg/kg-d)	EED Aq. Invert. (mg/kg-d)	EED Terr. Invert. (mg/kg-d)	EED Aq. Plants (mg/kg-d)	EED Terr. Plants (mg/kg-d)	EED Plant Roots (mg/kg-d)	EED Mammals (mg/kg-d)	EED Birds (mg/kg-d)	Total EED (mg/kg-d)	NOAEL (mg/kg-d)	EEQ N	LOAEL (mg/kg-d)	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E-01	0.00E+00	0.00E+00	0.00E+00	2.68E-01	2.68E+00	1.00E-01	1.33E+01	2.02E-02	3.85%	1.44%
1,3-Dinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.11E-03	0.00E+00	0.00E+00	0.00E+00	6.11E-03	1.13E-01	5.41E-02	2.64E-01	2.32E-02	2.08%	1.66%
2,3,7,8-TCDD TEQ	1.56E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-09	0.00E+00	0.00E+00	0.00E+00	1.29E-09	1.00E-06	1.29E-03	1.00E-05	1.29E-04	0.05%	0.01%
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.65E-01	0.00E+00	0.00E+00	0.00E+00	3.65E-01	2.00E-01	1.82E+00	3.00E-01	1.22E+00	70.19%	87.13%
2,4-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E-02	0.00E+00	0.00E+00	0.00E+00	1.10E-02	2.00E-01	5.48E-02	1.50E+00	7.30E-03	2.11%	0.52%
2,6-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.45E-02	0.00E+00	0.00E+00	0.00E+00	2.45E-02	2.00E-01	1.23E-01	6.00E-01	4.08E-02	4.71%	2.92%
4,4'-DDD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.18E-07	0.00E+00	0.00E+00	0.00E+00	1.18E-07	8.00E-01	1.48E-07	4.00E+00	2.95E-08	0.00%	0.00%
4,4'-DDE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.86E-06	0.00E+00	0.00E+00	0.00E+00	1.86E-06	8.00E-01	2.32E-06	4.00E+00	4.65E-07	0.00%	0.00%
4,4'-DDT	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.14E-08	0.00E+00	0.00E+00	0.00E+00	5.14E-08	8.00E-01	6.43E-08	4.00E+00	1.29E-08	0.00%	0.00%
Aldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
alpha-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.04E-08	0.00E+00	0.00E+00	0.00E+00	2.04E-08	4.58E+00	4.46E-09	9.16E+00	2.23E-09	0.00%	0.00%
Aluminum	2.19E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.65E-02	0.00E+00	0.00E+00	0.00E+00	3.16E-01	1.93E+00	1.64E-01	1.93E+01	1.64E-02	6.29%	1.17%
Antimony	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.06E-04	0.00E+00	0.00E+00	0.00E+00	7.06E-04	1.25E-01	5.65E-03	1.25E+00	5.65E-04	0.22%	0.04%
Aroclor 1242	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.72E-07	0.00E+00	0.00E+00	0.00E+00	1.72E-07	6.85E-02	2.52E-06	6.85E-01	2.52E-07	0.00%	0.00%
Aroclor 1248	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.80E-01	0.00E+00	0.00%	0.00%
Aroclor 1254	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.39E-07	0.00E+00	0.00E+00	0.00E+00	1.39E-07	6.80E-02	2.05E-06	6.80E-01	2.05E-07	0.00%	0.00%
Aroclor 1260	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E-08	0.00E+00	0.00E+00	0.00E+00	1.15E-08	6.80E-02	1.70E-07	6.80E-01	1.70E-08	0.00%	0.00%
Aroclor 1268	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-02	0.00E+00	6.80E-01	0.00E+00	0.00%	0.00%
Barium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.70E-01	0.00E+00	0.00E+00	0.00E+00	7.70E-01	5.10E+00	1.51E-01	1.98E+01	3.89E-02	5.80%	2.78%
Benzoic Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+00	0.00E+00	4.00E+01	0.00E+00	0.00%	0.00%
bis(2-ethylhexyl)phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+01	0.00E+00	1.83E+02	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+01	0.00E+00	4.70E+01	0.00E+00	0.00%	0.00%
Cadmium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.79E-03	0.00E+00	0.00E+00	0.00E+00	3.79E-03	1.00E+00	3.79E-03	1.00E+01	3.79E-04	0.15%	0.03%
Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Chromium	1.94E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.55E-03	0.00E+00	0.00E+00	0.00E+00	5.75E-03	3.28E+00	1.75E-03	1.31E+01	4.37E-04	0.07%	0.03%
cis-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Copper	2.32E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.60E-02	0.00E+00	0.00E+00	0.00E+00	4.62E-02	1.17E+01	3.95E-03	1.51E+01	3.05E-03	0.15%	0.22%
Dieldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-02	0.00E+00	2.00E-01	0.00E+00	0.00%	0.00%
Endrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.04E-08	0.00E+00	0.00E+00	0.00E+00	8.04E-08	9.20E-02	8.74E-07	9.20E-01	8.74E-08	0.00%	0.00%
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	0.00E+00	1.00E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.24E-05	0.00E+00	0.00E+00	0.00E+00	2.24E-05	8.00E-02	2.80E-04	2.90E-01	7.71E-05	0.01%	0.01%
HMX	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.01E-02	0.00E+00	0.00E+00	0.00E+00	8.01E-02	1.00E+00	8.01E-02	5.00E+00	1.60E-02	3.08%	1.15%
Iron	3.15E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.14E-01	0.00E+00	0.00E+00	0.00E+00	7.29E-01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	1.11E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	2.13E-02	0.00E+00	0.00E+00	0.00E+00	2.14E-02	8.00E+00	2.68E-03	8.00E+01	2.68E-04	0.10%	0.02%
Manganese	1.35E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.35E-02	8.80E+01	1.53E-04	2.84E+02	4.76E-05	0.01%	0.00%
Mercury (inorganic)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	9.29E-04	0.00E+00	0.00E+00	0.00E+00	9.29E-04	1.32E+01	7.03E-05	3.96E+01	2.34E-05	0.00%	0.00%
Mercury (methyl)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	3.20E-02	0.00E+00	1.60E-01	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.86E-09	0.00E+00	0.00E+00	0.00E+00	7.86E-09	7.00E-02	1.12E-07	7.00E-01	1.12E-08	0.00%	0.00%
Nickel	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.35E-03	0.00E+00	0.00E+00	0.00E+00	4.35E-03	4.00E+01	1.09E-04	8.00E+01	5.43E-05	0.00%	0.00%
Nitrate	8.43E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.19E-03	0.00E+00	0.00E+00	0.00E+00	9.62E-03	5.07E+02	1.90E-05	1.13E+03	8.51E-06	0.00%	0.00%
Nitrate/Nitrite	5.72E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.72E-01	5.07E+02	1.13E-03	1.13E+03	5.06E-04	0.04%	0.04%
Oxychlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.90E-06	0.00E+00	0.00E+00	0.00E+00	4.90E-06	2.10E+00	2.33E-06	6.30E+00	7.78E-07	0.00%	0.00%
Pentachloroanisole	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.69E-08	0.00E+00	0.00E+00	0.00E+00	5.69E-08	2.40E-01	2.37E-07	2.40E+00	2.37E-08	0.00%	0.00%
Pentachlorophenol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	2.40E+00	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	2.60E-02	0.00E+00	0.00E+00	0.00E+00	2.60E-02	8.50E+00	3.06E-03	2.55E+01	1.02E-03	0.12%	0.07%
Selenium	7.62E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.67E-03	0.00E+00	0.00E+00	0.00E+00	2.74E-03	2.00E-01	1.37E-02	3.30E-01	8.31E-03	0.53%	0.60%
Silver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	5.70E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.76E-02	0.00E+00	0.00E+00	0.00E+00	4.76E-02	2.63E+02	1.81E-04	7.89E+02	6.04E-05	0.01%	0.00%
Sulfate	8.10E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.05E-02	0.00E+00	0.00E+00	0.00E+00	8.91E-01	NA	NA	NA	NA	NA	NA
Thallium	1.14E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.14E-05	7.40E-03	1.55E-03	7.40E-02	1.55E-04	0.06%	0.01%
trans-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E+00	0.00E+00	9.16E+00	0.00E+00	0.00%	0.00%
Vanadium	8.37E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.30E-04	0.00E+00	0.00E+00	0.00E+00	1.47E-03	2.10E-01	6.99E-03	2.10E+00	6.99E-04	0.27%	0.05%
Zinc	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.98E-01	0.00E+00	0.00E+00	0.00E+00	3.98E-01	1.60E+02	2.49E-03	3.20E+02	1.24E-03	0.10%	0.09%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	2.0E+00	1.3E+00	77.01%	90.58%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	4.5E-09	2.2E-09	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	2.5E-06	5.1E-07	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	4.7E-06	4.7E-07	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	8.7E-07	8.7E-08	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text tables.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	1	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.000711	kg/d
Body weight =	0.0095	kg
Home range =	3930	acres
Water intake rate =	0.0015	L/d
Site Area =	486	acres
Area Use Factor (AUF) =	0.1236641	unitless
Exposure Duration (ED) =	1	unitless

Table E-199
Tier 1 COPCs
EEQs and Hazard Indices for the Snapping Turtle at LHAAP
Waste Sub-Area/Harrison Bayou Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							-----Unitless-----									mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	8.46E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-01	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDD TEQ	9.44E-09	mg/L	1.41E-05	mg/kg	7.33E-05	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	1.89E-10	2.24E-09	0.00E+00	2.80E-06	4.91E-08	0.00E+00	7.14E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.86E-06	NA	NA	NA	NA	NA	NA
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	4.91E+02	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	1.23E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	2.40E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	6.15E-04	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	2.06E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.85E-04	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.90E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aluminum	2.03E+01	mg/L	1.03E+04	mg/kg	9.02E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	4.06E-01	1.63E+00	0.00E+00	1.53E-01	7.35E+00	0.00E+00	2.63E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.57E+00	NA	NA	NA	NA	NA	NA
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.57E+00	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.34E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	5.97E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	2.66E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Barium	0.00E+00	mg/L	2.86E+02	mg/kg	1.01E+03	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	4.55E-02	0.00E+00	0.00E+00	2.05E-01	0.00E+00	2.93E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E-01	NA	NA	NA	NA	NA	NA
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.82E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	0.00E+00	4.47E-05	0.00E+00	0.00E+00	9.80E-04	0.00E+00	4.91E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.03E-03	NA	NA	NA	NA	NA	NA
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	0.00E+00	mg/L	1.83E-01	mg/kg	5.20E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.25E+01	1.33E+00	8.31E-01	1.33E+00	9.22E-01	9.22E-01	0.00E+00	2.91E-05	0.00E+00	0.00E+00	2.32E-04	0.00E+00	2.71E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.32E-04	NA	NA	NA	NA	NA	NA
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Chromium	1.27E-02	mg/L	0.00E+00	mg/kg	1.61E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	2.53E-04	0.00E+00	0.00E+00	2.21E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.24E-02	NA	NA	NA	NA	NA	NA
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Copper	1.69E-02	mg/L	7.78E+00	mg/kg	1.37E+01	mg/kg	1.00E+00	5.92E+03	5.25E+00	8.28E-01	5.59E-01	3.96E-01	5.59E-01	1.49E-01	1.49E-01	3.38E-04	1.24E-03	0.00E+00	1.75E-01	6.49E-03	0.00E+00	4.84E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.88E-01	NA	NA	NA	NA	NA	NA
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	4.39E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.10E-01	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Iron	2.91E+01	mg/L	0.00E+00	mg/kg	1.28E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	5.82E-01	0.00E+00	0.00E+00	5.09E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.15E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	7.24E-03	mg/L	0.00E+00	mg/kg	7.44E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	3.57E-01	NA	3.97E-02	NA	1.33E-02	1.33E-02	1.45E-04	0.00E+00	0.00E+00	1.90E-02	0.00E+00	0.00E+00	NA	0.00E+00	NA	0.00E+00	0.00E+00	1.91E-02	NA	NA	NA	NA	NA	NA
Manganese	9.37E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+03	2.10E+00	NA	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	1.87E-02	0.00E+00	0.00E+00	3.28E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.29E+00	NA	NA	NA	NA	NA	NA
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E-01	mg/kg	1.00E+00		2.87E+00	4.75E+00	NA	1.02E+00	NA	1.03E-01	1.03E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Mercury (methyl)	0.00E+00	mg/L	8.29E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.16E+00	NA	1.16E+00			0.00E+00	1.32E-05	0.00E+00	0.00E+00	3.78E-05	NA	1.07E-04	NA	0.00E+00	0.00E+00	0.00E+00	1.58E-04	NA	NA	NA	NA	NA	NA
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.52E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	mg/L	1.10E+01	mg/kg	7.49E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	5.96E-02	6.57E-02	5.96E-02	1.01E-01	1.01E-01	0.00E+00	1.75E-03	0.00E+00	0.00E+00	4.05E-03	0.00E+00	7.29E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.53E-03	NA	NA	NA	NA	NA	NA
Nitrate	7.46E-01	mg/L	7.48E-01	mg/kg	1.08E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	1.49E-02	1.19E-04	0.00E+00	1.39E+00	2.50E-04	0.00E+00	2.91E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.41E+00	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	5.84E+01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03								1.17E+00	0.00E+00	0.00E+00	1.09E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E+02	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	3.51E-03	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	2.98E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	1.32E-01	mg/kg	1.00E+00			1.14E+00	NA	2.56E+01	2.56E+01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Selenium	4.63E-03	mg/L	9.08E-01	mg/kg	6.76E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.03E+00	5.02E-01	4.87E-01	5.02E-01	1.95E-01	1.95E-01	9.25E-05	1.44E-04	0.00E+00	1.66E-03	6.49E-04	0.00E+00	5.07E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.05E-03	NA	NA	NA	NA	NA	NA
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	3.28E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Sulfate	5.76E+01	mg/L	7.51E+01	mg/kg	1.04E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	1.15E+00	1.19E-02	0.00E+00	1.08E+02	2.51E-02	0.00E+00	2.92E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E+02	NA	NA	NA	NA	NA	NA
Thallium	7.55E-04	mg/L	6.00E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00							1.51E-05	9.52E-05	0.00E+00	2.10E-02	4.29E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.15E-02	NA	NA	NA	NA	NA	NA
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Vanadium	6.18E-02	mg/L	0.00E+00	mg/kg	2.15E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	1.24E-03	0.00E+00	0.00E+00	1.15E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E-01	NA	NA	NA	NA	NA	NA
Zinc	0.00E+00	mg/L	3.58E+01	mg/kg	6.24E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.31E+00	1.01E+00	7.87E-01	1.01E+00	4.51E-01	4.51E-01	0.00E+00	5.68E-03	0.00E+00	0.00E+00	4.28E-02	0.00E+00	4.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.85E-02	NA	NA	NA	NA	NA	NA

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	0.0E+00	0.0E+00	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	0.0E+00	0.0E+00	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0.35	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.55	unitless
Aq. Invert diet fraction =	0.05	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0.000889	kg/d
Food ingestion rate =	0.0178	kg/d
Body weight =	5.6	kg
Home range =	0.593051	acres
Water intake rate =	0.112	L/d
Site Area =	475	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-200
Tier 2 COPCs
EEQs and Hazard Indices for the Snapping Turtle at LHAAP
Waste Sub-Area/Harrison Bayou Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
									---Unitless---						
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	5.16E+00	mg/kg	#######			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.49E-01	mg/kg	#######			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01
2,3,7,8-TCDD TEQ	8.00E-09	mg/L	4.00E-06	mg/kg	3.16E-05	mg/kg	#######	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	2.47E+02	mg/kg	#######			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	5.56E-01	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	1.24E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	4.55E-04	mg/kg	#######		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.48E-03	mg/kg	#######		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.98E-04	mg/kg	#######		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.37E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Aluminum	1.12E+01	mg/L	7.50E+03	mg/kg	6.95E+03	mg/kg	#######	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.06E+00	mg/kg	#######			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.22E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.21E-03	mg/kg	#######		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.94E-03	mg/kg	#######			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01
Barium	0.00E+00	mg/L	2.32E+02	mg/kg	5.33E+02	mg/kg	#######	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.33E-01	mg/kg	0.00E+00	mg/kg	#######	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01
Cadmium	0.00E+00	mg/L	1.83E-01	mg/kg	4.73E-01	mg/kg	#######	1.15E+03	6.00E-01	2.35E+01	1.33E+00	8.67E-01	1.33E+00	6.72E-01	6.72E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Chromium	9.95E-03	mg/L	0.00E+00	mg/kg	1.46E+01	mg/kg	#######	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Copper	1.19E-02	mg/L	6.82E+00	mg/kg	1.09E+01	mg/kg	#######	1.11E+03	1.56E+00	9.82E-01	6.06E-01	4.54E-01	6.06E-01	8.97E-02	8.97E-02
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.17E-04	mg/kg	#######			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.52E-01	mg/kg	#######			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	1.03E+00	mg/kg	#######			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01
Iron	1.61E+01	mg/L	0.00E+00	mg/kg	1.12E+04	mg/kg	#######	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.67E+00		1.39E+01	1.39E+01	1.39E+01		
Lead	5.66E-03	mg/L	0.00E+00	mg/kg	4.77E+01	mg/kg	#######	4.48E+02	7.10E-02	3.89E-01	NA	4.83E-02	NA	1.16E-02	1.16E-02
Manganese	6.92E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	2.50E+02	4.20E-01	NA	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	9.02E-02	mg/kg	#######		1.14E+00	5.42E+00	NA	1.11E+00	NA	9.15E-02	9.15E-02
Mercury (methyl)	0.00E+00	mg/L	6.13E-02	mg/kg	0.00E+00	mg/kg	#######		1.14E+00	NA	1.33E+00	NA	1.33E+00		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.47E-04	mg/kg	#######			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01
Nickel	0.00E+00	mg/L	9.70E+00	mg/kg	7.04E+00	mg/kg	#######		4.86E-01	1.06E+00	6.15E-02	6.67E-02	6.15E-02	8.71E-02	8.71E-02
Nitrate	4.32E-01	mg/L	4.60E-01	mg/kg	6.12E-01	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Nitrate/Nitrite	2.93E+01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	3.01E+02							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	3.21E-03	mg/kg	#######			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	2.24E-04	mg/kg	#######			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	9.65E-02	mg/kg	#######			3.00E-01	NA	2.91E+01	2.91E+01	1.11E-01	1.11E-01
Selenium	3.90E-03	mg/L	7.65E-01	mg/kg	5.98E-01	mg/kg	#######	2.05E+02	4.50E+00	1.07E+00	4.93E-01	4.81E-01	4.93E-01	1.51E-01	1.51E-01
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.50E+00		1.40E-02	1.40E-02	1.40E-02		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.45E+01	mg/kg	#######		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Sulfate	4.15E+01	mg/L	5.13E+01	mg/kg	4.14E+01	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Thallium	5.86E-04	mg/L	4.92E-01	mg/kg	0.00E+00	mg/kg	#######	7.50E+01	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Vanadium	4.29E-02	mg/L	0.00E+00	mg/kg	1.89E+01	mg/kg	#######	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03
Zinc	0.00E+00	mg/L	3.15E+01	mg/kg	4.92E+01	mg/kg	#######	2.91E+03	1.94E+00	6.23E+00	1.06E+00	8.74E-01	1.06E+00	1.84E-01	1.84E-01

Chemical	EED Surface Water (mg/kg-d)	EED Sediment (mg/kg-d)	EED Soil (mg/kg-d)	EED Fish (mg/kg-d)	EED Aq. Invert. (mg/kg-d)	EED Terr. Invert. (mg/kg-d)	EED Aq. Plants (mg/kg-d)	EED Terr. Plants (mg/kg-d)	EED Plant Roots (mg/kg-d)	EED Mammals (mg/kg-d)	EED Birds (mg/kg-d)	Total EED (mg/kg-d)	NOAEL (mg/kg-d)	EEQ N	LOAEL (mg/kg-d)	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDD TEQ	1.60E-10	6.35E-10	0.00E+00	3.23E-07	2.97E-09	0.00E+00	1.72E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.27E-07	NA	NA	NA	NA	NA	NA
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDT	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aluminum	2.24E-01	1.19E+00	0.00E+00	8.43E-02	5.36E+00	0.00E+00	1.25E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.88E+00	NA	NA	NA	NA	NA	NA
Antimony	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1248	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1254	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1260	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1268	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Barium	0.00E+00	3.68E-02	0.00E+00	0.00E+00	1.66E-01	0.00E+00	4.02E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.43E-01	NA	NA	NA	NA	NA	NA
Benzoic Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	3.69E-05	0.00E+00	0.00E+00	1.73E-04	0.00E+00	1.42E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E-04	NA	NA	NA	NA	NA	NA
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	0.00E+00	2.91E-05	0.00E+00	0.00E+00	1.75E-05	0.00E+00	2.71E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.17E-04	NA	NA	NA	NA	NA	NA
Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Chromium	1.99E-04	0.00E+00	0.00E+00	6.26E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.46E-03	NA	NA	NA	NA	NA	NA
cis-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Copper	2.37E-04	1.08E-03	0.00E+00	2.31E-02	1.69E-03	0.00E+00	4.60E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.07E-02	NA	NA	NA	NA	NA	NA
Dieldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Endrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Iron	3.23E-01	0.00E+00	0.00E+00	7.05E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.38E+00	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	1.13E-04	0.00E+00	0.00E+00	4.43E-03	0.00E+00	0.00E+00	NA	0.00E+00	NA	0.00E+00	0.00E+00	4.55E-03	NA	NA	NA	NA	NA	NA
Manganese	1.38E-02	0.00E+00	0.00E+00	3.02E-01	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.16E-01	NA	NA	NA	NA	NA	NA
Mercury (inorganic)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Mercury (methyl)	0.00E+00	9.72E-06	0.00E+00	0.00E+00	1.11E-05	NA	9.06E-05	NA	0.00E+00	0.00E+00	0.00E+00	1.11E-04	NA	NA	NA	NA	NA	NA
Mirex	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	1.54E-03	0.00E+00	0.00E+00	7.49E-04	0.00E+00	6.64E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.95E-03	NA	NA	NA	NA	NA	NA
Nitrate	8.63E-03	7.30E-05	0.00E+00	2.27E-01	3.07E-05	0.00E+00	1.07E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.36E-01	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	5.86E-01	0.00E+00	0.00E+00	1.54E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.60E+01	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
p-Isopropyltoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Pentachloroanisole	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Pentachlorophenol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Perchlorate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Selenium	7.81E-05	1.21E-04	0.00E+00	1.40E-03	5.47E-04	0.00E+00	4.20E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.57E-03	NA	NA	NA	NA	NA	NA
Silver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Strontium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Sulfate	8.30E-01	8.14E-03	0.00E+00	2.18E+01	3.42E-03	0.00E+00	1.20E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.27E+01	NA	NA	NA	NA	NA	NA
Thallium	1.17E-05	7.81E-05	0.00E+00	7.68E-05	3.52E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.18E-04	NA	NA	NA	NA	NA	NA
trans-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Vanadium	8.57E-04	0.00E+00	0.00E+00	2.25E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.34E-02	NA	NA	NA	NA	NA	NA
Zinc	0.00E+00	5.01E-03	0.00E+00	0.00E+00	9.71E-03	0.00E+00	3.73E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.20E-02	NA	NA	NA	NA	NA	NA

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	0.0E+00	0.0E+00	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	0.0E+00	0.0E+00	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0.35	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.55	unitless
Aq. Invert diet fraction =	0.05	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0.000889	kg/d
Food ingestion rate =	0.0178	kg/d
Body weight =	5.6	kg
Home range =	11.21854	acres
Water intake rate =	0.112	L/d
Site Area =	475	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-201
Tier 1 COPCs
EEQs and Hazard Indices for the Bank Swallow at LHAAP
Waste Sub-Area/Harrison Bayou Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
							Unitless	Unitless	Unitless	Unitless	Unitless	Unitless	Unitless	Unitless	
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	8.46E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-01	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00
2,3,7,8-TCDD TEQ	9.44E-09	mg/L	1.41E-05	mg/kg	7.33E-05	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	4.91E+02	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	1.23E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	2.40E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	6.15E-04	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	2.06E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.85E-04	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.90E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Aluminum	2.03E+01	mg/L	1.03E+04	mg/kg	9.02E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.57E+00	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.34E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	5.97E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	2.66E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00
Barium	0.00E+00	mg/L	2.86E+02	mg/kg	1.01E+03	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.82E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00
Cadmium	0.00E+00	mg/L	1.83E-01	mg/kg	5.20E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.25E+01	1.33E+00	8.31E-01	8.31E-01	9.22E-01	9.22E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Chromium	1.27E-02	mg/L	0.00E+00	mg/kg	1.61E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Copper	1.69E-02	mg/L	7.78E+00	mg/kg	1.37E+01	mg/kg	1.00E+00	5.92E+03	5.25E+00	8.28E-01	5.59E-01	3.96E-01	3.96E-01	1.49E-01	1.49E-01
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	4.39E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.10E-01	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00
Iron	2.91E+01	mg/L	0.00E+00	mg/kg	1.28E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01		
Lead	7.24E-03	mg/L	0.00E+00	mg/kg	7.44E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	3.57E-01	NA	3.97E-02	3.97E-02	1.33E-02	1.33E-02
Manganese	9.37E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+03	2.10E+00	NA	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E-01	mg/kg	1.00E+00		2.87E+00	4.75E+00	NA	1.02E+00	1.02E+00	1.03E-01	1.03E-01
Mercury (methyl)	0.00E+00	mg/L	8.29E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.16E+00	NA	NA		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.52E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00
Nickel	0.00E+00	mg/L	1.10E+01	mg/kg	7.49E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	5.96E-02	6.57E-02	6.57E-02	1.01E-01	1.01E-01
Nitrate	7.46E-01	mg/L	7.48E-01	mg/kg	1.08E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Nitrate/Nitrite	5.84E+01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	3.51E-03	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	2.98E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	1.32E-01	mg/kg	1.00E+00			1.14E+00	NA	2.56E+01	2.56E+01	1.66E-01	1.66E-01
Selenium	4.63E-03	mg/L	9.08E-01	mg/kg	6.76E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.03E+00	5.02E-01	4.87E-01	4.87E-01	1.95E-01	1.95E-01
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	3.28E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Sulfate	5.76E+01	mg/L	7.51E+01	mg/kg	1.04E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Thallium	7.55E-04	mg/L	6.00E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Vanadium	6.18E-02	mg/L	0.00E+00	mg/kg	2.15E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03
Zinc	0.00E+00	mg/L	3.58E+01	mg/kg	6.24E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.31E+00	1.01E+00	7.87E-01	7.87E-01	4.51E-01	4.51E-01

Chemical	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL		LOAEL		Percent Contribution to	Percent Contribution to
	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	EEQ N	mg/kg-d	EEQ L	EEQ N	EEQ L
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.22E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.22E-01	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.48E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.48E-02	4.22E-01	3.50E-02	1.27E+00	1.17E-02	0.01%	0.05%
2,3,7,8-TCDD TEQ	2.26E-09	3.32E-08	0.00E+00	0.00E+00	1.31E-05	7.70E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.09E-05	1.40E-05	1.49E+00	1.40E-04	1.49E-01	0.32%	0.59%
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.09E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.09E+01	7.00E-02	4.42E+02	1.80E+00	1.72E+01	94.40%	67.73%
2,4-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.80E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.80E-02	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.53E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.53E-01	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.51E-05	2.80E-03	1.61E-02	2.80E-02	1.61E-03	0.00%	0.01%
4,4'-DDE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E-04	5.80E-02	2.62E-03	5.80E-01	2.62E-04	0.00%	0.00%
4,4'-DDT	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.17E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.17E-05	2.80E-03	7.75E-03	2.80E-02	7.75E-04	0.00%	0.00%
Aldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.16E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.16E-05	2.14E+00	1.01E-05	1.07E+01	2.02E-06	0.00%	0.00%
Aluminum	4.87E+00	2.42E+01	0.00E+00	0.00E+00	1.97E+03	5.03E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E+03	1.10E+02	1.83E+01	3.29E+02	6.08E+00	3.90%	23.97%
Antimony	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.38E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.38E-02	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-04	4.10E-01	6.09E-04	1.23E+00	2.03E-04	0.00%	0.00%
Aroclor 1248	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Aroclor 1254	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.58E-04	1.80E-01	2.54E-03	1.80E+00	2.54E-04	0.00%	0.00%
Aroclor 1260	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E-04	1.80E-01	1.19E-03	1.80E+00	1.19E-04	0.00%	0.00%
Aroclor 1268	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Barium	0.00E+00	6.74E-01	0.00E+00	0.00E+00	5.48E+01	7.64E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.63E+01	2.08E+01	2.71E+00	4.17E+01	1.35E+00	0.58%	5.32%
Benzoic Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	6.63E-04	0.00E+00	0.00E+00	2.62E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.63E-01	1.11E+00	2.37E-01	3.33E+00	7.90E-02	0.05%	0.31%
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	0.00E+00	4.31E-04	0.00E+00	0.00E+00	6.22E-02	5.53E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.18E-01	1.45E+00	8.14E-02	2.00E+01	5.90E-03	0.02%	0.02%
Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Chromium	3.04E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.43E-01	1.00E+00	2.43E-01	5.00E+00	4.86E-02	0.05%	0.19%
cis-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Copper	4.05E-03	1.83E-02	0.00E+00	0.00E+00	1.74E+00	5.36E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.81E+00	4.70E+01	3.86E-02	6.17E+01	2.94E-02	0.01%	0.12%
Dieldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.70E-02	0.00E+00	2.31E-01	0.00E+00	0.00%	0.00%
Endrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.16E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.16E-05	3.00E-01	1.05E-04	9.00E-01	3.52E-05	0.00%	0.00%
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.20E-01	0.00E+00	2.76E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.54E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.54E-02	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.58E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.58E-02	NA	NA	NA	NA	NA	NA
Iron	6.98E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.72E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	1.74E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.26E-01	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E-01	1.13E+00	1.13E-01	1.13E+01	1.13E-02	0.02%	0.04%
Manganese	2.25E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.25E-01	9.77E+02	2.30E-04	9.77E+03	2.30E-05	0.00%	0.00%
Mercury (inorganic)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.46E-03	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.46E-03	4.50E-01	5.48E-03	9.00E-01	2.74E-03	0.00%	0.01%
Mercury (methyl)	0.00E+00	1.95E-04	0.00E+00	0.00E+00	1.01E-02	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	1.03E-02	6.40E-03	1.61E+00	6.40E-02	1.61E-01	0.34%	0.63%
Mirex	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.70E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.70E-05	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	2.59E-02	0.00E+00	0.00E+00	1.08E+00	1.67E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E+00	7.74E+01	1.65E-02	1.07E+02	1.19E-02	0.00%	0.05%
Nitrate	1.79E-01	1.76E-03	0.00E+00	0.00E+00	6.68E-02	5.79E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.53E-01	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	1.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.40E+01	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.39E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.39E-04	1.07E+02	2.24E-06	3.20E+02	7.48E-07	0.00%	0.00%
Pentachloroanisole	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E-05	6.73E+00	3.18E-06	6.73E+01	3.18E-07	0.00%	0.00%
Pentachlorophenol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E+00	0.00E+00	6.73E+01	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.12E-04	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.12E-04	6.50E+01	1.09E-05	1.30E+02	5.47E-06	0.00%	0.00%
Selenium	1.11E-03	2.14E-03	0.00E+00	0.00E+00	1.74E-01	3.29E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	1.80E+00	1.00E-01	5.40E+00	3.34E-02	0.02%	0.13%
Silver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E+00	0.00E+00	5.44E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.31E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.31E-02	NA	NA	NA	NA	NA	NA
Sulfate	1.38E+01	1.77E-01	0.00E+00	0.00E+00	6.71E+00	5.60E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.13E+01	NA	NA	NA	NA	NA	NA
Thallium	1.81E-04	1.41E-03	0.00E+00	0.00E+00	1.15E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.16E-01	3.50E-01	3.32E-01	1.05E+00	1.11E-01	0.07%	0.44%
trans-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Vanadium	1.48E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.92E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.37E-02	1.14E+01	2.08E-03	3.42E+01	6.94E-04	0.00%	0.00%
Zinc	0.00E+00	8.42E-02	0.00E+00	0.00E+00	1.15E+01	1.57E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.31E+01	1.45E+01	9.04E-01	1.31E+02	1.00E-01	0.19%	0.39%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	4.4E+02	1.7E+01	94.40%	67.73%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.0E-05	2.0E-06	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	2.6E-02	2.6E-03	0.01%	0.01%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	4.3E-03	5.8E-04	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	2.4E-01	7.9E-02	0.05%	0.31%
Aldrin/Dieldrin/Endrin EEQ:	1.1E-04	3.5E-05	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\, x\, Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text tables.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0.9	unitless
Terr. Invert diet fraction =	0.1	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	3.44E-05	kg/d
Food ingestion rate =	0.00069	kg/d
Body weight =	0.0146	kg
Home range =	49.4	acres
Water intake rate =	0.0035	L/d
Site Area =	486	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-202
Tier 2 COPCs
EEQs and Hazard Indices for the Bank Swallow at LHAAP
Waste Sub-Area/Harrison Bayou Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
									---Unitless---						
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	5.16E+00	mg/kg	#######			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.49E-01	mg/kg	#######			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01
2,3,7,8-TCDD TEQ	8.00E-09	mg/L	4.00E-06	mg/kg	3.16E-05	mg/kg	#######	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	2.47E+02	mg/kg	#######			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	5.56E-01	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	1.24E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	4.55E-04	mg/kg	#######		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.48E-03	mg/kg	#######		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.98E-04	mg/kg	#######		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.37E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Aluminum	1.12E+01	mg/L	7.50E+03	mg/kg	6.95E+03	mg/kg	#######	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.06E+00	mg/kg	#######			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.22E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.21E-03	mg/kg	#######		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.94E-03	mg/kg	#######			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01
Barium	0.00E+00	mg/L	2.32E+02	mg/kg	5.33E+02	mg/kg	#######	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.33E-01	mg/kg	0.00E+00	mg/kg	#######	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01
Cadmium	0.00E+00	mg/L	1.83E-01	mg/kg	4.73E-01	mg/kg	#######	1.15E+03	6.00E-01	2.35E+01	1.33E+00	8.67E-01	8.67E-01	6.72E-01	6.72E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Chromium	9.95E-03	mg/L	0.00E+00	mg/kg	1.46E+01	mg/kg	#######	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Copper	1.19E-02	mg/L	6.82E+00	mg/kg	1.09E+01	mg/kg	#######	1.11E+03	1.56E+00	9.82E-01	6.06E-01	4.54E-01	4.54E-01	8.97E-02	8.97E-02
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.17E-04	mg/kg	#######			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.52E-01	mg/kg	#######			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	1.03E+00	mg/kg	#######			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01
Iron	1.61E+01	mg/L	0.00E+00	mg/kg	1.12E+04	mg/kg	#######	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.67E+00		1.39E+01	1.39E+01	1.39E+01		
Lead	5.66E-03	mg/L	0.00E+00	mg/kg	4.77E+01	mg/kg	#######	4.48E+02	7.10E-02	3.89E-01	NA	4.83E-02	4.83E-02	1.16E-02	1.16E-02
Manganese	6.92E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	2.50E+02	4.20E-01	NA	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	9.02E-02	mg/kg	#######		1.14E+00	5.42E+00	NA	1.11E+00	1.11E+00	9.15E-02	9.15E-02
Mercury (methyl)	0.00E+00	mg/L	6.13E-02	mg/kg	0.00E+00	mg/kg	#######		1.14E+00	NA	1.33E+00	NA	NA		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.47E-04	mg/kg	#######			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01
Nickel	0.00E+00	mg/L	9.70E+00	mg/kg	7.04E+00	mg/kg	#######		4.86E-01	1.06E+00	6.15E-02	6.67E-02	6.67E-02	8.71E-02	8.71E-02
Nitrate	4.32E-01	mg/L	4.60E-01	mg/kg	6.12E-01	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Nitrate/Nitrite	2.93E+01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	3.01E+02							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	3.21E-03	mg/kg	#######			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	2.24E-04	mg/kg	#######			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	9.65E-02	mg/kg	#######			3.00E-01	NA	2.91E+01	2.91E+01	1.11E-01	1.11E-01
Selenium	3.90E-03	mg/L	7.65E-01	mg/kg	5.98E-01	mg/kg	#######	2.05E+02	4.50E+00	1.07E+00	4.93E-01	4.81E-01	4.81E-01	1.51E-01	1.51E-01
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.50E+00		1.40E-02	1.40E-02	1.40E-02		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.45E+01	mg/kg	#######		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Sulfate	4.15E+01	mg/L	5.13E+01	mg/kg	4.14E+01	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Thallium	5.86E-04	mg/L	4.92E-01	mg/kg	0.00E+00	mg/kg	#######	7.50E+01	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Vanadium	4.29E-02	mg/L	0.00E+00	mg/kg	1.89E+01	mg/kg	#######	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03
Zinc	0.00E+00	mg/L	3.15E+01	mg/kg	4.92E+01	mg/kg	#######	2.91E+03	1.94E+00	6.23E+00	1.06E+00	8.74E-01	8.74E-01	1.84E-01	1.84E-01

Chemical	EED Surface Water (mg/kg-d)	EED Sediment (mg/kg-d)	EED Soil (mg/kg-d)	EED Fish (mg/kg-d)	EED Aq. Invert. (mg/kg-d)	EED Terr. Invert. (mg/kg-d)	EED Aq. Plants (mg/kg-d)	EED Terr. Plants (mg/kg-d)	EED Plant Roots (mg/kg-d)	EED Mammals (mg/kg-d)	EED Birds (mg/kg-d)	Total EED (mg/kg-d)	NOAEL (mg/kg-d)	EEQ N	LOAEL (mg/kg-d)	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E-01	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.35E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.35E-03	4.22E-01	1.27E-02	1.27E+00	4.23E-03	0.01%	0.04%
2,3,7,8-TCDD TEQ	1.92E-09	9.42E-09	0.00E+00	0.00E+00	7.95E-07	1.65E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.45E-06	1.40E-05	1.75E-01	1.40E-04	1.75E-02	0.12%	0.16%
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.98E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.98E+00	7.00E-02	1.28E+02	1.80E+00	4.99E+00	88.31%	46.36%
2,4-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.04E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.04E-02	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.55E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.55E-02	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.93E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.93E-05	2.80E-03	6.88E-03	2.80E-02	6.88E-04	0.00%	0.01%
4,4'-DDE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.28E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.28E-05	5.80E-02	1.08E-03	5.80E-01	1.08E-04	0.00%	0.00%
4,4'-DDT	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.70E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.70E-06	2.80E-03	3.11E-03	2.80E-02	3.11E-04	0.00%	0.00%
Aldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.02E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.02E-05	2.14E+00	4.75E-06	1.07E+01	9.50E-07	0.00%	0.00%
Aluminum	2.69E+00	1.77E+01	0.00E+00	0.00E+00	1.44E+03	1.41E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.46E+03	1.10E+02	1.33E+01	3.29E+02	4.43E+00	9.14%	41.13%
Antimony	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.92E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.92E-03	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.57E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.57E-05	4.10E-01	2.34E-04	1.23E+00	7.78E-05	0.00%	0.00%
Aroclor 1248	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Aroclor 1254	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.86E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.86E-04	1.80E-01	1.03E-03	1.80E+00	1.03E-04	0.00%	0.00%
Aroclor 1260	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.01E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.01E-05	1.80E-01	5.00E-04	1.80E+00	5.00E-05	0.00%	0.00%
Aroclor 1268	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Barium	0.00E+00	5.45E-01	0.00E+00	0.00E+00	4.43E+01	2.29E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.51E+01	2.08E+01	2.17E+00	4.17E+01	1.08E+00	1.49%	10.05%
Benzoic Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	5.48E-04	0.00E+00	0.00E+00	4.62E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.68E-02	1.11E+00	4.21E-02	3.33E+00	1.40E-02	0.03%	0.13%
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	0.00E+00	4.31E-04	0.00E+00	0.00E+00	4.67E-03	5.25E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.76E-02	1.45E+00	3.97E-02	2.00E+01	2.88E-03	0.03%	0.03%
Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Chromium	2.39E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.12E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.35E-02	1.00E+00	2.35E-02	5.00E+00	4.71E-03	0.02%	0.04%
cis-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Copper	2.85E-03	1.60E-02	0.00E+00	0.00E+00	4.52E-01	5.08E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.22E-01	4.70E+01	1.11E-02	6.17E+01	8.46E-03	0.01%	0.08%
Dieldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.70E-02	0.00E+00	2.31E-01	0.00E+00	0.00%	0.00%
Endrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.32E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.32E-05	3.00E-01	4.40E-05	9.00E-01	1.47E-05	0.00%	0.00%
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.20E-01	0.00E+00	2.76E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.43E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.43E-03	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.58E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.58E-02	NA	NA	NA	NA	NA	NA
Iron	3.87E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.77E+00	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	1.36E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.76E-02	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.90E-02	1.13E+00	7.88E-02	1.13E+01	7.88E-03	0.05%	0.07%
Manganese	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.66E-01	9.77E+02	1.70E-04	9.77E+03	1.70E-05	0.00%	0.00%
Mercury (inorganic)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.31E-03	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.31E-03	4.50E-01	5.13E-03	9.00E-01	2.57E-03	0.00%	0.02%
Mercury (methyl)	0.00E+00	1.44E-04	0.00E+00	0.00E+00	2.96E-03	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	3.10E-03	6.40E-03	4.85E-01	6.40E-02	4.85E-02	0.33%	0.45%
Mirex	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E-05	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	2.28E-02	0.00E+00	0.00E+00	2.01E-01	3.53E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.59E-01	7.74E+01	3.34E-03	1.07E+02	2.42E-03	0.00%	0.02%
Nitrate	1.03E-01	1.08E-03	0.00E+00	0.00E+00	8.21E-03	8.68E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.14E-01	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	7.02E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.02E+00	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.26E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.26E-04	1.07E+02	1.18E-06	3.20E+02	3.94E-07	0.00%	0.00%
Pentachloroanisole	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.28E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.28E-06	6.73E+00	1.38E-06	6.73E+01	1.38E-07	0.00%	0.00%
Pentachlorophenol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E+00	0.00E+00	6.73E+01	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.37E-04	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.37E-04	6.50E+01	2.11E-06	1.30E+02	1.05E-06	0.00%	0.00%
Selenium	9.36E-04	1.80E-03	0.00E+00	0.00E+00	1.46E-01	3.01E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E-01	1.80E+00	8.45E-02	5.40E+00	2.82E-02	0.06%	0.26%
Silver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E+00	0.00E+00	5.44E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.01E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.01E-02	NA	NA	NA	NA	NA	NA
Sulfate	9.94E+00	1.21E-01	0.00E+00	0.00E+00	9.16E-01	5.87E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E+01	NA	NA	NA	NA	NA	NA
Thallium	1.40E-04	1.16E-03	0.00E+00	0.00E+00	9.41E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.54E-02	3.50E-01	2.73E-01	1.05E+00	9.09E-02	0.19%	0.84%
trans-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Vanadium	1.03E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.76E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.40E-02	1.14E+01	1.23E-03	3.42E+01	4.10E-04	0.00%	0.00%
Zinc	0.00E+00	7.43E-02	0.00E+00	0.00E+00	2.60E+00	1.45E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.12E+00	1.45E+01	2.84E-01	1.31E+02	3.15E-02	0.20%	0.29%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	1.3E+02	5.0E+00	88.31%	46.36%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	4.8E-06	9.5E-07	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	1.1E-02	1.1E-03	0.01%	0.01%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.8E-03	2.3E-04	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	4.2E-02	1.4E-02	0.03%	0.13%
Aldrin/Dieldrin/Endrin EEQ:	4.4E-05	1.5E-05	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi\,x\,Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rates, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0.9	unitless
Terr. Invert diet fraction =	0.1	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	3.44E-05	kg/d
Food ingestion rate =	0.00069	kg/d
Body weight =	0.0146	kg
Home range =	247	acres
Water intake rate =	0.0035	L/d
Site Area =	486	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-203
Tier 1 COPCs
EEQs and Hazard Indices for the American Woodcock at LHAAP
Waste Sub-Area/Harrison Bayou Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF (Unitless)	Fish BAF (Unitless)	Aq. Invert. BAF (Unitless)	Terr. Invert. BAF (Unitless)	Aq. Plant BAF (Unitless)	Terr. Plant BAF (Unitless)	Plant Root BAF (Unitless)	Mammal BAF (Unitless)	Bird BAF (Unitless)
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	8.46E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-01	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00
2,3,7,8-TCDD TEQ	9.44E-09	mg/L	1.41E-05	mg/kg	7.33E-05	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	4.91E+02	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	1.23E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	2.40E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	6.15E-04	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	2.06E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.85E-04	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.90E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Aluminum	2.03E+01	mg/L	1.03E+04	mg/kg	9.02E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.57E+00	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.34E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	5.97E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	2.66E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00
Barium	0.00E+00	mg/L	2.86E+02	mg/kg	1.01E+03	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.82E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00
Cadmium	0.00E+00	mg/L	1.83E-01	mg/kg	5.20E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.25E+01	1.33E+00	8.31E-01	8.31E-01	9.22E-01	9.22E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Chromium	1.27E-02	mg/L	0.00E+00	mg/kg	1.61E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Copper	1.69E-02	mg/L	7.78E+00	mg/kg	1.37E+01	mg/kg	1.00E+00	5.92E+03	5.25E+00	8.28E-01	5.59E-01	3.96E-01	3.96E-01	1.49E-01	1.49E-01
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	4.39E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.10E-01	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00
Iron	2.91E+01	mg/L	0.00E+00	mg/kg	1.28E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01		
Lead	7.24E-03	mg/L	0.00E+00	mg/kg	7.44E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	3.57E-01	NA	3.97E-02	3.97E-02	1.33E-02	1.33E-02
Manganese	9.37E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+03	2.10E+00	NA	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E-01	mg/kg	1.00E+00		2.87E+00	4.75E+00	NA	1.02E+00	1.02E+00	1.03E-01	1.03E-01
Mercury (methyl)	0.00E+00	mg/L	8.29E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.16E+00	NA	NA		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.52E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00
Nickel	0.00E+00	mg/L	1.10E+01	mg/kg	7.49E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	5.96E-02	6.57E-02	6.57E-02	1.01E-01	1.01E-01
Nitrate	7.46E-01	mg/L	7.48E-01	mg/kg	1.08E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Nitrate/Nitrite	5.84E+01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	3.51E-03	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	2.98E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	1.32E-01	mg/kg	1.00E+00			1.14E+00	NA	2.56E+01	2.56E+01	1.66E-01	1.66E-01
Selenium	4.63E-03	mg/L	9.08E-01	mg/kg	6.76E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.03E+00	5.02E-01	4.87E-01	4.87E-01	1.95E-01	1.95E-01
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	3.28E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Sulfate	5.76E+01	mg/L	7.51E+01	mg/kg	1.04E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Thallium	7.55E-04	mg/L	6.00E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Vanadium	6.18E-02	mg/L	0.00E+00	mg/kg	2.15E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03
Zinc	0.00E+00	mg/L	3.58E+01	mg/kg	6.24E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.31E+00	1.01E+00	7.87E-01	7.87E-01	4.51E-01	4.51E-01

Chemical	EED Surface Water mg/kg-d	EED Sediment mg/kg-d	EED Soil mg/kg-d	EED Fish mg/kg-d	EED Aq. Invert. mg/kg-d	EED Terr. Invert. mg/kg-d	EED Aq. Plants mg/kg-d	EED Terr. Plants mg/kg-d	EED Plant Roots mg/kg-d	EED Mammals mg/kg-d	EED Birds mg/kg-d	Total EED mg/kg-d	NOAEL mg/kg-d	EEQ N	LOAEL mg/kg-d	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	1.09E-01	0.00E+00	0.00E+00	1.36E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.37E+01	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	0.00E+00	3.05E-03	0.00E+00	0.00E+00	3.86E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.89E-01	4.22E-01	9.22E-01	1.27E+00	3.07E-01	0.01%	0.07%
2,3,7,8-TCDD TEQ	9.44E-10	0.00E+00	9.41E-07	0.00E+00	0.00E+00	2.01E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.02E-04	1.40E-05	1.44E+01	1.40E-04	1.44E+00	0.12%	0.32%
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	6.30E+00	0.00E+00	0.00E+00	8.08E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.14E+02	7.00E-02	1.16E+04	1.80E+00	4.52E+02	99.70%	98.77%
2,4-Dinitrotoluene	0.00E+00	0.00E+00	1.58E-02	0.00E+00	0.00E+00	2.04E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.05E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	0.00E+00	3.09E-02	0.00E+00	0.00E+00	3.98E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.01E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	0.00E+00	7.90E-06	0.00E+00	0.00E+00	1.18E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.19E-03	2.80E-03	4.23E-01	2.80E-02	4.23E-02	0.00%	0.01%
4,4'-DDE	0.00E+00	0.00E+00	2.64E-05	0.00E+00	0.00E+00	3.96E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.99E-03	5.80E-02	6.88E-02	5.80E-01	6.88E-03	0.00%	0.00%
4,4'-DDT	0.00E+00	0.00E+00	3.66E-06	0.00E+00	0.00E+00	5.66E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.70E-04	2.80E-03	2.04E-01	2.80E-02	2.04E-02	0.00%	0.00%
Aldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	0.00E+00	3.72E-06	0.00E+00	0.00E+00	5.63E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.67E-04	2.14E+00	2.65E-04	1.07E+01	5.30E-05	0.00%	0.00%
Aluminum	2.03E+00	0.00E+00	1.16E+02	0.00E+00	0.00E+00	1.31E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.49E+02	1.10E+02	2.27E+00	3.29E+02	7.57E-01	0.02%	0.17%
Antimony	0.00E+00	0.00E+00	3.29E-02	0.00E+00	0.00E+00	3.61E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.94E-01	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	0.00E+00	4.29E-05	0.00E+00	0.00E+00	6.52E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.56E-03	4.10E-01	1.60E-02	1.23E+00	5.34E-03	0.00%	0.00%
Aroclor 1248	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Aroclor 1254	0.00E+00	0.00E+00	7.67E-05	0.00E+00	0.00E+00	1.19E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E-02	1.80E-01	6.68E-02	1.80E+00	6.68E-03	0.00%	0.00%
Aroclor 1260	0.00E+00	0.00E+00	3.41E-05	0.00E+00	0.00E+00	5.59E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.62E-03	1.80E-01	3.12E-02	1.80E+00	3.12E-03	0.00%	0.00%
Aroclor 1268	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Barium	0.00E+00	0.00E+00	1.30E+01	0.00E+00	0.00E+00	1.99E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.29E+01	2.08E+01	1.58E+00	4.17E+01	7.90E-01	0.01%	0.17%
Benzoic Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E+00	0.00E+00	3.33E+00	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	0.00E+00	0.00E+00	6.68E-03	0.00E+00	0.00E+00	1.44E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.45E+00	1.45E+00	1.00E+00	2.00E+01	7.25E-02	0.01%	0.02%
Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Chromium	1.27E-03	0.00E+00	2.06E-01	0.00E+00	0.00E+00	6.26E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.47E+00	1.00E+00	6.47E+00	5.00E+00	1.29E+00	0.06%	0.28%
cis-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Copper	1.69E-03	0.00E+00	1.76E-01	0.00E+00	0.00E+00	1.40E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.58E+00	4.70E+01	3.35E-02	6.17E+01	2.55E-02	0.00%	0.01%
Dieldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.70E-02	0.00E+00	2.31E-01	0.00E+00	0.00%	0.00%
Endrin	0.00E+00	0.00E+00	5.63E-06	0.00E+00	0.00E+00	8.26E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.32E-04	3.00E-01	2.77E-03	9.00E-01	9.24E-04	0.00%	0.00%
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.20E-01	0.00E+00	2.76E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	0.00E+00	2.69E-03	0.00E+00	0.00E+00	4.01E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.04E-01	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	0.00E+00	1.83E-02	0.00E+00	0.00E+00	2.24E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.26E+00	NA	NA	NA	NA	NA	NA
Iron	2.91E+00	0.00E+00	1.64E+02	0.00E+00	0.00E+00	1.23E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.90E+02	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	7.24E-04	0.00E+00	9.55E-01	0.00E+00	0.00E+00	3.28E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.24E+00	1.13E+00	3.75E+00	1.13E+01	3.75E-01	0.03%	0.08%
Manganese	9.37E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.37E-02	9.77E+02	9.59E-05	9.77E+03	9.59E-06	0.00%	0.00%
Mercury (inorganic)	0.00E+00	0.00E+00	1.41E-03	0.00E+00	0.00E+00	6.43E-02	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.57E-02	4.50E-01	1.46E-01	9.00E-01	7.30E-02	0.00%	0.02%
Mercury (methyl)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	6.40E-03	0.00E+00	6.40E-02	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	0.00E+00	4.52E-06	0.00E+00	0.00E+00	7.04E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.09E-04	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	0.00E+00	9.61E-02	0.00E+00	0.00E+00	4.37E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.46E+00	7.74E+01	5.77E-02	1.07E+02	4.17E-02	0.00%	0.01%
Nitrate	7.46E-02	0.00E+00	1.38E-02	0.00E+00	0.00E+00	1.51E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	5.84E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.84E+00	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	0.00E+00	4.51E-05	0.00E+00	0.00E+00	6.25E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.29E-03	1.07E+02	5.90E-05	3.20E+02	1.97E-05	0.00%	0.00%
Pentachloroanisole	0.00E+00	0.00E+00	3.82E-06	0.00E+00	0.00E+00	5.58E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.62E-04	6.73E+00	8.34E-05	6.73E+01	8.34E-06	0.00%	0.00%
Pentachlorophenol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E+00	0.00E+00	6.73E+01	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	0.00E+00	1.70E-03	0.00E+00	0.00E+00	1.86E-02	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.03E-02	6.50E+01	3.12E-04	1.30E+02	1.56E-04	0.00%	0.00%
Selenium	4.63E-04	0.00E+00	8.68E-03	0.00E+00	0.00E+00	8.60E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.51E-02	1.80E+00	5.28E-02	5.40E+00	1.76E-02	0.00%	0.00%
Silver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E+00	0.00E+00	5.44E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	0.00E+00	4.21E-01	0.00E+00	0.00E+00	1.12E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.54E+00	NA	NA	NA	NA	NA	NA
Sulfate	5.76E+00	0.00E+00	1.33E+00	0.00E+00	0.00E+00	1.46E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.17E+01	NA	NA	NA	NA	NA	NA
Thallium	7.55E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.55E-05	3.50E-01	2.16E-04	1.05E+00	7.19E-05	0.00%	0.00%
trans-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Vanadium	6.18E-03	0.00E+00	2.75E-01	0.00E+00	0.00E+00	2.33E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.15E-01	1.14E+01	4.51E-02	3.42E+01	1.50E-02	0.00%	0.00%
Zinc	0.00E+00	0.00E+00	8.01E-01	0.00E+00	0.00E+00	4.09E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.17E+01	1.45E+01	2.88E+00	1.31E+02	3.18E-01	0.02%	0.07%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	1.2E+04	4.5E+02	99.70%	98.77%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	2.7E-04	5.3E-05	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	7.0E-01	7.0E-02	0.01%	0.02%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	1.1E-01	1.5E-02	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	2.8E-03	9.2E-04	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi \times Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	1	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.002529	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.0243	kg/d
Body weight =	0.197	kg
Home range =	0.74	acres
Water intake rate =	0.0197	L/d
Site Area =	486	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-204
Tier 2 COPCs
EEQs and Hazard Indices for the American Woodcock at LHAAP
Waste Sub-Area/Harrison Bayou Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
									Unitless	Unitless	Unitless	Unitless	Unitless	Unitless	
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	5.16E+00	mg/kg	#######			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.49E-01	mg/kg	#######			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01
2,3,7,8-TCDD TEQ	8.00E-09	mg/L	4.00E-06	mg/kg	3.16E-05	mg/kg	#######	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	2.47E+02	mg/kg	#######			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	5.56E-01	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	1.24E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	4.55E-04	mg/kg	#######		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.48E-03	mg/kg	#######		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.98E-04	mg/kg	#######		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.37E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Aluminum	1.12E+01	mg/L	7.50E+03	mg/kg	6.95E+03	mg/kg	#######	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.06E+00	mg/kg	#######			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.22E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.21E-03	mg/kg	#######		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.94E-03	mg/kg	#######			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01
Barium	0.00E+00	mg/L	2.32E+02	mg/kg	5.33E+02	mg/kg	#######	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.33E-01	mg/kg	0.00E+00	mg/kg	#######	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01
Cadmium	0.00E+00	mg/L	1.83E-01	mg/kg	4.73E-01	mg/kg	#######	1.15E+03	6.00E-01	2.35E+01	1.33E+00	8.67E-01	8.67E-01	6.72E-01	6.72E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Chromium	9.95E-03	mg/L	0.00E+00	mg/kg	1.46E+01	mg/kg	#######	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Copper	1.19E-02	mg/L	6.82E+00	mg/kg	1.09E+01	mg/kg	#######	1.11E+03	1.56E+00	9.82E-01	6.06E-01	4.54E-01	4.54E-01	8.97E-02	8.97E-02
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.17E-04	mg/kg	#######			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.52E-01	mg/kg	#######			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	1.03E+00	mg/kg	#######			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01
Iron	1.61E+01	mg/L	0.00E+00	mg/kg	1.12E+04	mg/kg	#######	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.67E+00		1.39E+01	1.39E+01	1.39E+01		
Lead	5.66E-03	mg/L	0.00E+00	mg/kg	4.77E+01	mg/kg	#######	4.48E+02	7.10E-02	3.89E-01	NA	4.83E-02	4.83E-02	1.16E-02	1.16E-02
Manganese	6.92E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	2.50E+02	4.20E-01	NA	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	9.02E-02	mg/kg	#######		1.14E+00	5.42E+00	NA	1.11E+00	1.11E+00	9.15E-02	9.15E-02
Mercury (methyl)	0.00E+00	mg/L	6.13E-02	mg/kg	0.00E+00	mg/kg	#######		1.14E+00	NA	1.33E+00	NA	NA		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.47E-04	mg/kg	#######			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01
Nickel	0.00E+00	mg/L	9.70E+00	mg/kg	7.04E+00	mg/kg	#######		4.86E-01	1.06E+00	6.15E-02	6.67E-02	6.67E-02	8.71E-02	8.71E-02
Nitrate	4.32E-01	mg/L	4.60E-01	mg/kg	6.12E-01	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Nitrate/Nitrite	2.93E+01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	3.01E+02							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	3.21E-03	mg/kg	#######			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	2.24E-04	mg/kg	#######			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	9.65E-02	mg/kg	#######			3.00E-01	NA	2.91E+01	2.91E+01	1.11E-01	1.11E-01
Selenium	3.90E-03	mg/L	7.65E-01	mg/kg	5.98E-01	mg/kg	#######	2.05E+02	4.50E+00	1.07E+00	4.93E-01	4.81E-01	4.81E-01	1.51E-01	1.51E-01
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.50E+00		1.40E-02	1.40E-02	1.40E-02		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.45E+01	mg/kg	#######		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Sulfate	4.15E+01	mg/L	5.13E+01	mg/kg	4.14E+01	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Thallium	5.86E-04	mg/L	4.92E-01	mg/kg	0.00E+00	mg/kg	#######	7.50E+01	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Vanadium	4.29E-02	mg/L	0.00E+00	mg/kg	1.89E+01	mg/kg	#######	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03
Zinc	0.00E+00	mg/L	3.15E+01	mg/kg	4.92E+01	mg/kg	#######	2.91E+03	1.94E+00	6.23E+00	1.06E+00	8.74E-01	8.74E-01	1.84E-01	1.84E-01

Chemical	EED Surface Water (mg/kg-d)	EED Sediment (mg/kg-d)	EED Soil (mg/kg-d)	EED Fish (mg/kg-d)	EED Aq. Invert. (mg/kg-d)	EED Terr. Invert. (mg/kg-d)	EED Aq. Plants (mg/kg-d)	EED Terr. Plants (mg/kg-d)	EED Plant Roots (mg/kg-d)	EED Mammals (mg/kg-d)	EED Birds (mg/kg-d)	Total EED (mg/kg-d)	NOAEL (mg/kg-d)	EEQ N	LOAEL (mg/kg-d)	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	6.62E-02	0.00E+00	0.00E+00	4.79E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.86E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	0.00E+00	1.92E-03	0.00E+00	0.00E+00	1.40E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-01	4.22E-01	3.35E-01	1.27E+00	1.12E-01	0.01%	0.08%
2,3,7,8-TCDD TEQ	8.00E-10	0.00E+00	4.06E-07	0.00E+00	0.00E+00	4.30E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.34E-05	1.40E-05	3.10E+00	1.40E-04	3.10E-01	0.09%	0.23%
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	3.17E+00	0.00E+00	0.00E+00	2.34E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.38E+02	7.00E-02	3.40E+03	1.80E+00	1.32E+02	99.63%	98.47%
2,4-Dinitrotoluene	0.00E+00	0.00E+00	7.14E-03	0.00E+00	0.00E+00	5.31E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.38E-01	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	0.00E+00	1.60E-02	0.00E+00	0.00E+00	1.19E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	0.00E+00	5.85E-06	0.00E+00	0.00E+00	5.03E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.09E-04	2.80E-03	1.82E-01	2.80E-02	1.82E-02	0.01%	0.01%
4,4'-DDE	0.00E+00	0.00E+00	1.90E-05	0.00E+00	0.00E+00	1.64E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.66E-03	5.80E-02	2.86E-02	5.80E-01	2.86E-03	0.00%	0.00%
4,4'-DDT	0.00E+00	0.00E+00	2.55E-06	0.00E+00	0.00E+00	2.27E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.30E-04	2.80E-03	8.20E-02	2.80E-02	8.20E-03	0.00%	0.01%
Aldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	0.00E+00	3.04E-06	0.00E+00	0.00E+00	2.65E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E-04	2.14E+00	1.25E-04	1.07E+01	2.51E-05	0.00%	0.00%
Aluminum	1.12E+00	0.00E+00	8.93E+01	0.00E+00	0.00E+00	3.69E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E+02	1.10E+02	1.16E+00	3.29E+02	3.87E-01	0.03%	0.29%
Antimony	0.00E+00	0.00E+00	2.65E-02	0.00E+00	0.00E+00	7.63E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.03E-01	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	0.00E+00	2.85E-05	0.00E+00	0.00E+00	2.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.53E-03	4.10E-01	6.16E-03	1.23E+00	2.05E-03	0.00%	0.00%
Aroclor 1248	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Aroclor 1254	0.00E+00	0.00E+00	5.41E-05	0.00E+00	0.00E+00	4.86E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.91E-03	1.80E-01	2.73E-02	1.80E+00	2.73E-03	0.00%	0.00%
Aroclor 1260	0.00E+00	0.00E+00	2.49E-05	0.00E+00	0.00E+00	2.35E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.38E-03	1.80E-01	1.32E-02	1.80E+00	1.32E-03	0.00%	0.00%
Aroclor 1268	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Barium	0.00E+00	0.00E+00	6.84E+00	0.00E+00	0.00E+00	5.98E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E+01	2.08E+01	6.17E-01	4.17E+01	3.08E-01	0.02%	0.23%
Benzoic Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E+00	0.00E+00	3.33E+00	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	0.00E+00	0.00E+00	6.07E-03	0.00E+00	0.00E+00	1.37E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.38E+00	1.45E+00	9.49E-01	2.00E+01	6.88E-02	0.03%	0.05%
Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Chromium	9.95E-04	0.00E+00	1.88E-01	0.00E+00	0.00E+00	5.52E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.41E-01	1.00E+00	7.41E-01	5.00E+00	1.48E-01	0.02%	0.11%
cis-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Copper	1.19E-03	0.00E+00	1.40E-01	0.00E+00	0.00E+00	1.32E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.47E+00	4.70E+01	3.12E-02	6.17E+01	2.38E-02	0.00%	0.02%
Dieldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.70E-02	0.00E+00	2.31E-01	0.00E+00	0.00%	0.00%
Endrin	0.00E+00	0.00E+00	4.07E-06	0.00E+00	0.00E+00	3.44E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.48E-04	3.00E-01	1.16E-03	9.00E-01	3.87E-04	0.00%	0.00%
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.20E-01	0.00E+00	2.76E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	0.00E+00	1.95E-03	0.00E+00	0.00E+00	1.68E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.70E-01	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	0.00E+00	1.33E-02	0.00E+00	0.00E+00	9.35E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.48E-01	NA	NA	NA	NA	NA	NA
Iron	1.61E+00	0.00E+00	1.44E+02	0.00E+00	0.00E+00	4.97E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.95E+02	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	5.66E-04	0.00E+00	6.12E-01	0.00E+00	0.00E+00	2.29E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.90E+00	1.13E+00	2.57E+00	1.13E+01	2.57E-01	0.08%	0.19%
Manganese	6.92E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.92E-02	9.77E+02	7.08E-05	9.77E+03	7.08E-06	0.00%	0.00%
Mercury (inorganic)	0.00E+00	0.00E+00	1.16E-03	0.00E+00	0.00E+00	6.03E-02	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.14E-02	4.50E-01	1.37E-01	9.00E-01	6.83E-02	0.00%	0.05%
Mercury (methyl)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	6.40E-03	0.00E+00	6.40E-02	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	0.00E+00	3.17E-06	0.00E+00	0.00E+00	2.85E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.89E-04	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	0.00E+00	9.04E-02	0.00E+00	0.00E+00	9.20E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.01E+00	7.74E+01	1.31E-02	1.07E+02	9.45E-03	0.00%	0.01%
Nitrate	4.32E-02	0.00E+00	7.86E-03	0.00E+00	0.00E+00	2.27E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.37E-02	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	2.93E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.93E+00	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	0.00E+00	4.11E-05	0.00E+00	0.00E+00	3.29E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.33E-03	1.07E+02	3.12E-05	3.20E+02	1.04E-05	0.00%	0.00%
Pentachloroanisole	0.00E+00	0.00E+00	2.88E-06	0.00E+00	0.00E+00	2.42E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.45E-04	6.73E+00	3.64E-05	6.73E+01	3.64E-06	0.00%	0.00%
Pentachlorophenol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E+00	0.00E+00	6.73E+01	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	0.00E+00	1.24E-03	0.00E+00	0.00E+00	3.57E-03	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.81E-03	6.50E+01	7.40E-05	1.30E+02	3.70E-05	0.00%	0.00%
Selenium	3.90E-04	0.00E+00	7.68E-03	0.00E+00	0.00E+00	7.87E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.67E-02	1.80E+00	4.82E-02	5.40E+00	1.61E-02	0.00%	0.01%
Silver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E+00	0.00E+00	5.44E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	0.00E+00	3.15E-01	0.00E+00	0.00E+00	2.63E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.78E-01	NA	NA	NA	NA	NA	NA
Sulfate	4.15E+00	0.00E+00	5.32E-01	0.00E+00	0.00E+00	1.53E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.21E+00	NA	NA	NA	NA	NA	NA
Thallium	5.86E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.86E-05	3.50E-01	1.67E-04	1.05E+00	5.58E-05	0.00%	0.00%
trans-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Vanadium	4.29E-03	0.00E+00	2.43E-01	0.00E+00	0.00E+00	9.80E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.45E-01	1.14E+01	3.03E-02	3.42E+01	1.01E-02	0.00%	0.01%
Zinc	0.00E+00	0.00E+00	6.32E-01	0.00E+00	0.00E+00	3.78E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.85E+01	1.45E+01	2.65E+00	1.31E+02	2.94E-01	0.08%	0.22%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	3.4E+03	1.3E+02	99.63%	98.47%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.3E-04	2.5E-05	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	2.9E-01	2.9E-02	0.01%	0.02%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	4.7E-02	6.1E-03	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	1.2E-03	3.9E-04	0.00%	0.00%

Intake Equation:

$$E_j = \left(\frac{A}{HR}\left[\sum_{i=1}^{m}\left(\frac{IRi \times Cij}{BW}\right)\right]\right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text tables.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Unit
Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	1	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0.002529	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.0243	kg/d
Body weight =	0.197	kg
Home range =	57	acres
Water intake rate =	0.0197	L/d
Site Area =	486	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-205
Tier 1 COPCs
EEQs and Hazard Indices for the Belted Kingfisher at LHAAP
Waste Sub-Area/Harrison Bayou Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
							---Unitless---								
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	8.46E+00	mg/kg	1.00E+00			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-01	mg/kg	1.00E+00			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00
2,3,7,8-TCDD TEQ	9.44E-09	mg/L	1.41E-05	mg/kg	7.33E-05	mg/kg	1.00E+00	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	4.91E+02	mg/kg	1.00E+00			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	1.23E+00	mg/kg	1.00E+00			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	2.40E+00	mg/kg	1.00E+00			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	6.15E-04	mg/kg	1.00E+00		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	2.06E-03	mg/kg	1.00E+00		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.85E-04	mg/kg	1.00E+00		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.90E-04	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Aluminum	2.03E+01	mg/L	1.03E+04	mg/kg	9.02E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.57E+00	mg/kg	1.00E+00			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.34E-03	mg/kg	1.00E+00			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	5.97E-03	mg/kg	1.00E+00		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	2.66E-03	mg/kg	1.00E+00			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00
Barium	0.00E+00	mg/L	2.86E+02	mg/kg	1.01E+03	mg/kg	1.00E+00	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.82E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00
Cadmium	0.00E+00	mg/L	1.83E-01	mg/kg	5.20E-01	mg/kg	1.00E+00	1.63E+03	7.99E+00	2.25E+01	1.33E+00	8.31E-01	8.31E-01	9.22E-01	9.22E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Chromium	1.27E-02	mg/L	0.00E+00	mg/kg	1.61E+01	mg/kg	1.00E+00	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Copper	1.69E-02	mg/L	7.78E+00	mg/kg	1.37E+01	mg/kg	1.00E+00	5.92E+03	5.25E+00	8.28E-01	5.59E-01	3.96E-01	3.96E-01	1.49E-01	1.49E-01
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	4.39E-04	mg/kg	1.00E+00			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.10E-01	mg/kg	1.00E+00			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+00	mg/kg	1.00E+00			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00
Iron	2.91E+01	mg/L	0.00E+00	mg/kg	1.28E+04	mg/kg	1.00E+00	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		2.19E+01		1.41E+01	1.41E+01	1.41E+01		
Lead	7.24E-03	mg/L	0.00E+00	mg/kg	7.44E+01	mg/kg	1.00E+00	1.50E+03	6.07E-01	3.57E-01	NA	3.97E-02	3.97E-02	1.33E-02	1.33E-02
Manganese	9.37E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.00E+03	2.10E+00	NA	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E-01	mg/kg	1.00E+00		2.87E+00	4.75E+00	NA	1.02E+00	1.02E+00	1.03E-01	1.03E-01
Mercury (methyl)	0.00E+00	mg/L	8.29E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		2.87E+00	NA	1.16E+00	NA	NA		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.52E-04	mg/kg	1.00E+00			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00
Nickel	0.00E+00	mg/L	1.10E+01	mg/kg	7.49E+00	mg/kg	1.00E+00		2.32E+00	4.73E+00	5.96E-02	6.57E-02	6.57E-02	1.01E-01	1.01E-01
Nitrate	7.46E-01	mg/L	7.48E-01	mg/kg	1.08E+00	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Nitrate/Nitrite	5.84E+01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	1.07E+03							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	3.51E-03	mg/kg	1.00E+00			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	2.98E-04	mg/kg	1.00E+00			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	1.32E-01	mg/kg	1.00E+00			1.14E+00	NA	2.56E+01	2.56E+01	1.66E-01	1.66E-01
Selenium	4.63E-03	mg/L	9.08E-01	mg/kg	6.76E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.03E+00	5.02E-01	4.87E-01	4.87E-01	1.95E-01	1.95E-01
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.70E-01	1.70E-01	1.70E-01		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	3.28E+01	mg/kg	1.00E+00		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Sulfate	5.76E+01	mg/L	7.51E+01	mg/kg	1.04E+02	mg/kg	1.00E+00	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01
Thallium	7.55E-04	mg/L	6.00E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	1.59E+04	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00
Vanadium	6.18E-02	mg/L	0.00E+00	mg/kg	2.15E+01	mg/kg	1.00E+00	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03
Zinc	0.00E+00	mg/L	3.58E+01	mg/kg	6.24E+01	mg/kg	1.00E+00	5.00E+03	7.53E+00	5.31E+00	1.01E+00	7.87E-01	7.87E-01	4.51E-01	4.51E-01

Chemical	EED Surface Water (mg/kg-d)	EED Sediment (mg/kg-d)	EED Soil (mg/kg-d)	EED Fish (mg/kg-d)	EED Aq. Invert. (mg/kg-d)	EED Terr. Invert. (mg/kg-d)	EED Aq. Plants (mg/kg-d)	EED Terr. Plants (mg/kg-d)	EED Plant Roots (mg/kg-d)	EED Mammals (mg/kg-d)	EED Birds (mg/kg-d)	Total EED (mg/kg-d)	NOAEL (mg/kg-d)	EEQ N	LOAEL (mg/kg-d)	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.22E-01	0.00E+00	1.27E+00	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	1.02E-09	9.86E-08	0.00E+00	1.96E-04	5.40E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.02E-04	1.40E-05	1.44E+01	1.40E-04	1.44E+00	43.88%	19.56%
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.80E-03	0.00E+00	2.80E-02	0.00E+00	0.00%	0.00%
4,4'-DDE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.80E-02	0.00E+00	5.80E-01	0.00E+00	0.00%	0.00%
4,4'-DDT	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.80E-03	0.00E+00	2.80E-02	0.00E+00	0.00%	0.00%
Aldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Aluminum	2.20E+00	7.18E+01	0.00E+00	1.07E+01	8.09E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.94E+02	1.10E+02	8.15E+00	3.29E+02	2.72E+00	24.80%	36.84%
Antimony	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.10E-01	0.00E+00	1.23E+00	0.00E+00	0.00%	0.00%
Aroclor 1248	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Aroclor 1254	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Aroclor 1260	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Aroclor 1268	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Barium	0.00E+00	2.00E+00	0.00E+00	0.00E+00	2.25E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.45E+01	2.08E+01	1.18E+00	4.17E+01	5.88E-01	3.59%	7.98%
Benzoic Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	1.97E-03	0.00E+00	0.00E+00	1.08E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E-01	1.11E+00	9.89E-02	3.33E+00	3.30E-02	0.30%	0.45%
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	0.00E+00	1.28E-03	0.00E+00	0.00E+00	2.56E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E-02	1.45E+00	1.85E-02	2.00E+01	1.34E-03	0.06%	0.02%
Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Chromium	1.37E-03	0.00E+00	0.00E+00	1.55E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.55E+00	1.00E+00	1.55E+00	5.00E+00	3.10E-01	4.72%	4.21%
cis-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Copper	1.83E-03	5.43E-02	0.00E+00	1.22E+01	7.14E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E+01	4.70E+01	2.77E-01	6.17E+01	2.11E-01	0.84%	2.86%
Dieldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.70E-02	0.00E+00	2.31E-01	0.00E+00	0.00%	0.00%
Endrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-02	0.00E+00	1.00E-01	0.00E+00	0.00%	0.00%
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.20E-01	0.00E+00	2.76E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Iron	3.15E+00	0.00E+00	0.00E+00	3.56E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.56E+03	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	7.83E-04	0.00E+00	0.00E+00	1.33E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E+00	3.85E+00	3.46E-01	1.16E+01	1.15E-01	1.05%	1.56%
Manganese	1.01E-01	0.00E+00	0.00E+00	2.29E+02	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.29E+02	9.77E+02	2.35E-01	9.77E+03	2.35E-02	0.71%	0.32%
Mercury (inorganic)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.50E-01	0.00E+00	9.00E-01	0.00E+00	0.00%	0.00%
Mercury (methyl)	0.00E+00	5.79E-04	0.00E+00	0.00E+00	4.16E-03	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	4.74E-03	6.40E-03	7.40E-01	6.40E-02	7.40E-02	2.25%	1.00%
Mirex	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	7.68E-02	0.00E+00	0.00E+00	4.46E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.23E-01	7.74E+01	6.75E-03	1.07E+02	4.88E-03	0.02%	0.07%
Nitrate	8.06E-02	5.23E-03	0.00E+00	9.75E+01	2.75E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.76E+01	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	6.32E+00	0.00E+00	0.00E+00	7.64E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.64E+03	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+02	0.00E+00	3.20E+02	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E+00	0.00E+00	6.73E+01	0.00E+00	0.00%	0.00%
Pentachlorophenol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E+00	0.00E+00	6.73E+01	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.50E+01	0.00E+00	1.30E+02	0.00E+00	0.00%	0.00%
Selenium	5.00E-04	6.34E-03	0.00E+00	1.16E-01	7.14E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.94E-01	4.40E-01	4.42E-01	1.50E+00	1.30E-01	1.34%	1.76%
Silver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E+00	0.00E+00	5.44E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Sulfate	6.23E+00	5.25E-01	0.00E+00	7.53E+03	2.76E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.54E+03	NA	NA	NA	NA	NA	NA
Thallium	8.16E-05	4.19E-03	0.00E+00	1.47E+00	4.72E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E+00	3.50E-01	4.34E+00	1.05E+00	1.45E+00	13.22%	19.65%
trans-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Vanadium	6.68E-03	0.00E+00	0.00E+00	8.08E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.08E+00	1.14E+01	7.09E-01	3.42E+01	2.36E-01	2.16%	3.21%
Zinc	0.00E+00	2.50E-01	0.00E+00	0.00E+00	4.71E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.96E+00	1.45E+01	3.42E-01	1.31E+02	3.78E-02	1.04%	0.51%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	0.0E+00	0.0E+00	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	9.9E-02	3.3E-02	0.30%	0.45%
Aldrin/Dieldrin/Endrin EEQ:	0.0E+00	0.0E+00	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\,x\,Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.875	unitless
Aq. Invert diet fraction =	0.125	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0.00103359	kg/d
Food ingestion rate =	0.0207	kg/d
Body weight =	0.148	kg
Home range =	118.6101	acres
Water intake rate =	0.016	L/d
Site Area =	475	acres
Area Use Factor (AUF) =	1	unitless
Exposure Duration (ED) =	1	unitless

Table E-206
Tier 2 COPCs
EEQs and Hazard Indices for the Belted Kingfisher at LHAAP
Waste Sub-Area/Harrison Bayou Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
							-----Unitless-----								
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	5.16E+00	mg/kg	#######			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.49E-01	mg/kg	#######			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01
2,3,7,8-TCDD TEQ	8.00E-09	mg/L	4.00E-06	mg/kg	3.16E-05	mg/kg	#######	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	2.47E+02	mg/kg	#######			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	5.56E-01	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	1.24E+00	mg/kg	#######			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	4.55E-04	mg/kg	#######		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.48E-03	mg/kg	#######		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.98E-04	mg/kg	#######		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.37E-04	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Aluminum	1.12E+01	mg/L	7.50E+03	mg/kg	6.95E+03	mg/kg	#######	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.06E+00	mg/kg	#######			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.22E-03	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.21E-03	mg/kg	#######		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.94E-03	mg/kg	#######			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01
Barium	0.00E+00	mg/L	2.32E+02	mg/kg	5.33E+02	mg/kg	#######	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.33E-01	mg/kg	0.00E+00	mg/kg	#######	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01
Cadmium	0.00E+00	mg/L	1.83E-01	mg/kg	4.73E-01	mg/kg	#######	1.15E+03	6.00E-01	2.35E+01	1.33E+00	8.67E-01	8.67E-01	6.72E-01	6.72E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Chromium	9.95E-03	mg/L	0.00E+00	mg/kg	1.46E+01	mg/kg	#######	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Copper	1.19E-02	mg/L	6.82E+00	mg/kg	1.09E+01	mg/kg	#######	1.11E+03	1.56E+00	9.82E-01	6.06E-01	4.54E-01	4.54E-01	8.97E-02	8.97E-02
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.17E-04	mg/kg	#######			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.52E-01	mg/kg	#######			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	1.03E+00	mg/kg	#######			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01
Iron	1.61E+01	mg/L	0.00E+00	mg/kg	1.12E+04	mg/kg	#######	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.67E+00		1.39E+01	1.39E+01	1.39E+01		
Lead	5.66E-03	mg/L	0.00E+00	mg/kg	4.77E+01	mg/kg	#######	4.48E+02	7.10E-02	3.89E-01	NA	4.83E-02	4.83E-02	1.16E-02	1.16E-02
Manganese	6.92E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	2.50E+02	4.20E-01	NA	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	9.02E-02	mg/kg	#######		1.14E+00	5.42E+00	NA	1.11E+00	1.11E+00	9.15E-02	9.15E-02
Mercury (methyl)	0.00E+00	mg/L	6.13E-02	mg/kg	0.00E+00	mg/kg	#######		1.14E+00	NA	1.33E+00	NA	NA		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.47E-04	mg/kg	#######			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01
Nickel	0.00E+00	mg/L	9.70E+00	mg/kg	7.04E+00	mg/kg	#######		4.86E-01	1.06E+00	6.15E-02	6.67E-02	6.67E-02	8.71E-02	8.71E-02
Nitrate	4.32E-01	mg/L	4.60E-01	mg/kg	6.12E-01	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Nitrate/Nitrite	2.93E+01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	3.01E+02							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	3.21E-03	mg/kg	#######			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	2.24E-04	mg/kg	#######			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	9.65E-02	mg/kg	#######			3.00E-01	NA	2.91E+01	2.91E+01	1.11E-01	1.11E-01
Selenium	3.90E-03	mg/L	7.65E-01	mg/kg	5.98E-01	mg/kg	#######	2.05E+02	4.50E+00	1.07E+00	4.93E-01	4.81E-01	4.81E-01	1.51E-01	1.51E-01
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.50E+00		1.40E-02	1.40E-02	1.40E-02		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.45E+01	mg/kg	#######		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Sulfate	4.15E+01	mg/L	5.13E+01	mg/kg	4.14E+01	mg/kg	#######	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Thallium	5.86E-04	mg/L	4.92E-01	mg/kg	0.00E+00	mg/kg	#######	7.50E+01	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Vanadium	4.29E-02	mg/L	0.00E+00	mg/kg	1.89E+01	mg/kg	#######	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03
Zinc	0.00E+00	mg/L	3.15E+01	mg/kg	4.92E+01	mg/kg	#######	2.91E+03	1.94E+00	6.23E+00	1.06E+00	8.74E-01	8.74E-01	1.84E-01	1.84E-01

Chemical	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.22E-01	0.00E+00	1.27E+00	0.00E+00	0.00%	0.00%
2,3,7,8-TCDD TEQ	2.22E-10	7.16E-09	0.00E+00	5.79E-06	8.37E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.88E-06	1.40E-05	4.20E-01	1.40E-04	4.20E-02	16.22%	5.46%
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
2,4-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.80E-03	0.00E+00	2.80E-02	0.00E+00	0.00%	0.00%
4,4'-DDE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.80E-02	0.00E+00	5.80E-01	0.00E+00	0.00%	0.00%
4,4'-DDT	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.80E-03	0.00E+00	2.80E-02	0.00E+00	0.00%	0.00%
Aldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Aluminum	3.11E-01	1.34E+01	0.00E+00	1.51E+00	1.51E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.67E+02	1.10E+02	1.52E+00	3.29E+02	5.06E-01	58.56%	65.69%
Antimony	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.10E-01	0.00E+00	1.23E+00	0.00E+00	0.00%	0.00%
Aroclor 1248	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Aroclor 1254	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Aroclor 1260	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Aroclor 1268	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Barium	0.00E+00	4.15E-01	0.00E+00	0.00E+00	4.67E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.08E+00	2.08E+01	2.44E-01	4.17E+01	1.22E-01	9.43%	15.83%
Benzoic Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	4.16E-04	0.00E+00	0.00E+00	4.87E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.29E-03	1.11E+00	4.76E-03	3.33E+00	1.59E-03	0.18%	0.21%
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	0.00E+00	3.28E-04	0.00E+00	0.00E+00	4.92E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.20E-04	1.45E+00	5.65E-04	2.00E+01	4.10E-05	0.02%	0.01%
Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Chromium	2.76E-04	0.00E+00	0.00E+00	1.12E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	1.00E+00	1.13E-01	5.00E+00	2.25E-02	4.35%	2.93%
cis-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Copper	3.29E-04	1.22E-02	0.00E+00	4.14E-01	4.76E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.74E-01	4.70E+01	1.01E-02	6.17E+01	7.68E-03	0.39%	1.00%
Dieldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.70E-02	0.00E+00	2.31E-01	0.00E+00	0.00%	0.00%
Endrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-02	0.00E+00	1.00E-01	0.00E+00	0.00%	0.00%
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.20E-01	0.00E+00	2.76E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Iron	4.47E-01	0.00E+00	0.00E+00	1.27E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E+02	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	1.57E-04	0.00E+00	0.00E+00	7.96E-02	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.97E-02	3.85E+00	2.07E-02	1.16E+01	6.90E-03	0.80%	0.90%
Manganese	1.92E-02	0.00E+00	0.00E+00	5.42E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E+00	9.77E+02	5.57E-03	9.77E+03	5.57E-04	0.21%	0.07%
Mercury (inorganic)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.50E-01	0.00E+00	9.00E-01	0.00E+00	0.00%	0.00%
Mercury (methyl)	0.00E+00	1.10E-04	0.00E+00	0.00E+00	3.12E-04	NA	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	4.21E-04	6.40E-03	6.59E-02	6.40E-02	6.59E-03	2.54%	0.86%
Mirex	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	1.74E-02	0.00E+00	0.00E+00	2.11E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.85E-02	7.74E+01	4.97E-04	1.07E+02	3.60E-04	0.02%	0.05%
Nitrate	1.20E-02	8.23E-04	0.00E+00	4.07E+00	8.65E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.09E+00	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	8.12E-01	0.00E+00	0.00E+00	2.76E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.77E+02	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+02	0.00E+00	3.20E+02	0.00E+00	0.00%	0.00%
Pentachloroanisole	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E+00	0.00E+00	6.73E+01	0.00E+00	0.00%	0.00%
Pentachlorophenol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E+00	0.00E+00	6.73E+01	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.50E+01	0.00E+00	1.30E+02	0.00E+00	0.00%	0.00%
Selenium	1.08E-04	1.37E-03	0.00E+00	2.51E-02	1.54E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.20E-02	4.40E-01	9.55E-02	1.50E+00	2.80E-02	3.68%	3.64%
Silver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E+00	0.00E+00	5.44E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Sulfate	1.15E+00	9.18E-02	0.00E+00	3.92E+02	9.65E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.93E+02	NA	NA	NA	NA	NA	NA
Thallium	1.62E-05	8.80E-04	0.00E+00	1.38E-03	9.92E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.22E-02	3.50E-01	3.48E-02	1.05E+00	1.16E-02	1.34%	1.51%
trans-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Vanadium	1.19E-03	0.00E+00	0.00E+00	4.04E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.06E-01	1.14E+01	3.56E-02	3.42E+01	1.19E-02	1.37%	1.54%
Zinc	0.00E+00	5.65E-02	0.00E+00	0.00E+00	2.74E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.30E-01	1.45E+01	2.28E-02	1.31E+02	2.52E-03	0.88%	0.33%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	0.0E+00	0.0E+00	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	4.8E-03	1.6E-03	0.18%	0.21%
Aldrin/Dieldrin/Endrin EEQ:	0.0E+00	0.0E+00	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\,x\,Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rates, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text table.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.875	unitless
Aq. Invert diet fraction =	0.125	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0	unitless
Bird diet fraction =	0	unitless
Soil ingestion rate =	0	kg/d
Sediment ingestion rate =	0.001034	kg/d
Food ingestion rate =	0.0207	kg/d
Body weight =	0.148	kg
Home range =	1853	acres
Water intake rate =	0.016	L/d
Site Area =	475	acres
Area Use Factor (AUF) =	0.256341	unitless
Exposure Duration (ED) =	1	unitless

Table E-207
Tier 1 COPCs
EEQs and Hazard Indices for the Red-tailed Hawk at LHAAP
Waste Sub-Area/Harrison Bayou Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF	EED Surface Water	EED Sediment	EED Soil	EED Fish	EED Aq. Invert.	EED Terr. Invert.	EED Aq. Plants	EED Terr. Plants	EED Plant Roots	EED Mammals	EED Birds	Total EED	NOAEL	EEQ N	LOAEL	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
							-----	-----	-----	-----	Unitless	-----	-----	-----	-----	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d	mg/kg-d		mg/kg-d			
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	8.46E+00	mg/kg	#######			1.31E+01	8.96E+00	8.96E+00	8.96E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	2.63E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.55E-02	1.67E-02	1.15E-01	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.38E-01	mg/kg	#######			1.31E+01	5.33E+00	5.33E+00	5.33E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	7.40E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.69E-03	4.69E-04	3.23E-03	4.22E-01	7.65E-03	1.27E+00	2.55E-03	0.01%	0.07%
2,3,7,8-TCDD TEQ	9.44E-09	mg/L	1.41E-05	mg/kg	7.33E-05	mg/kg	#######	1.70E+05	2.19E+01	2.22E+01	4.55E-03	4.55E-03	4.55E-03	6.09E-02	6.09E-02	2.77E-10	0.00E+00	2.28E-08	6.49E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.37E-08	7.64E-09	6.56E-06	1.40E-05	4.69E-01	1.40E-04	4.69E-02	0.49%	1.21%
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	4.91E+02	mg/kg	#######			1.33E+01	3.20E-01	3.20E-01	3.20E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.53E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.54E+00	9.68E-01	6.66E+00	7.00E-02	9.52E+01	1.80E+00	3.70E+00	99.04%	95.35%
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	1.23E+00	mg/kg	#######			1.34E+01	2.78E+00	2.78E+00	2.78E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	3.82E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.39E-02	2.42E-03	1.67E-02	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	2.40E+00	mg/kg	#######			1.34E+01	2.37E+00	2.37E+00	2.37E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	7.47E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.71E-02	4.74E-03	3.26E-02	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	6.15E-04	mg/kg	#######		4.20E-01	1.55E+01	8.00E-02	8.00E-02	8.00E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.91E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.94E-06	1.21E-06	8.35E-06	2.80E-03	2.98E-03	2.80E-02	2.98E-04	0.00%	0.01%
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	2.06E-03	mg/kg	#######		1.23E+01	1.56E+01	6.20E-01	6.20E-01	6.20E-01	9.94E-01	9.94E-01	0.00E+00	0.00E+00	6.40E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-05	3.50E-06	2.42E-05	5.80E-02	4.17E-04	5.80E-01	4.17E-05	0.00%	0.00%
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	2.85E-04	mg/kg	#######		1.68E+00	1.61E+01	8.00E-02	8.00E-02	8.00E-02	1.66E+00	1.66E+00	0.00E+00	0.00E+00	8.87E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.65E-06	8.11E-07	5.55E-06	2.80E-03	1.98E-03	2.80E-02	1.98E-04	0.00%	0.01%
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.61E+01	6.78E-03	6.78E-03	6.78E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.90E-04	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	9.01E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.27E-06	5.71E-07	3.93E-06	2.14E+00	1.84E-06	1.07E+01	3.68E-07	0.00%	0.00%
Aluminum	2.03E+01	mg/L	1.03E+04	mg/kg	9.02E+03	mg/kg	#######	4.30E+00	4.50E+00	1.18E-01	2.30E-03	2.30E-03	2.30E-03	8.66E-03	8.66E-03	5.96E-01	0.00E+00	2.81E+00	3.53E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.65E-01	1.34E-01	4.65E+00	1.10E+02	4.24E-02	3.29E+02	1.41E-02	0.04%	0.36%
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.57E+00	mg/kg	#######			1.14E+00	7.00E-02	7.00E-02	7.00E-02	1.66E-01	1.66E-01	0.00E+00	0.00E+00	7.98E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.18E-03	7.29E-04	5.70E-03	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	3.34E-03	mg/kg	#######			1.58E+01	1.63E-01	1.63E-01	1.63E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.04E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.77E-05	6.59E-06	4.54E-05	4.10E-01	1.11E-04	1.23E+00	3.69E-05	0.00%	0.00%
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.58E+01	1.01E-02	1.01E-02	1.01E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	5.97E-03	mg/kg	#######		2.19E+01	1.62E+01	8.84E-03	8.84E-03	8.84E-03	1.06E+00	1.06E+00	0.00E+00	0.00E+00	1.86E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.21E-05	1.08E-05	7.48E-05	1.80E-01	4.16E-04	1.80E+00	4.16E-05	0.00%	0.00%
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	2.66E-03	mg/kg	#######			1.71E+01	4.55E-03	4.55E-03	4.55E-03	1.92E+00	1.92E+00	0.00E+00	0.00E+00	8.26E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.99E-05	8.72E-06	5.95E-05	1.80E-01	3.30E-04	1.80E+00	3.30E-05	0.00%	0.00%
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.40E+01	5.26E-01	5.26E-01	5.26E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Barium	0.00E+00	mg/L	2.86E+02	mg/kg	1.01E+03	mg/kg	#######	1.01E+03	4.50E+00	1.60E-01	9.20E-01	9.20E-01	9.20E-01	3.31E-02	3.31E-02	0.00E+00	0.00E+00	3.14E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.28E-01	5.73E-02	7.00E-01	2.08E+01	3.36E-02	4.17E+01	1.68E-02	0.03%	0.43%
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.33E+01	3.21E+00	3.21E+00	3.21E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.82E-01	mg/kg	0.00E+00	mg/kg	#######	1.55E+03	2.19E+01	1.71E+01	1.57E-03	1.57E-03	1.57E-03	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E+00	0.00E+00	3.33E+00	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.49E+01	6.17E-02	6.17E-02	6.17E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	0.00E+00	mg/L	1.83E-01	mg/kg	5.20E-01	mg/kg	#######	1.63E+03	7.99E+00	2.25E+01	1.33E+00	8.31E-01	8.31E-01	9.22E-01	9.22E-01	0.00E+00	0.00E+00	1.62E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.70E-03	8.20E-04	5.68E-03	1.45E+00	3.92E-03	2.00E+01	2.84E-04	0.00%	0.01%
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Chromium	1.27E-02	mg/L	0.00E+00	mg/kg	1.61E+01	mg/kg	#######	1.00E+03		3.16E+00	4.80E-01	4.80E-01	4.80E-01	3.33E-01	3.33E-01	3.72E-04	0.00E+00	4.99E-03	5.12E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.24E-02	9.16E-03	1.18E-01	1.00E+00	1.18E-01	5.00E+00	2.36E-02	0.12%	0.61%
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Copper	1.69E-02	mg/L	7.78E+00	mg/kg	1.37E+01	mg/kg	#######	5.92E+03	5.25E+00	8.28E-01	5.59E-01	3.96E-01	3.96E-01	1.49E-01	1.49E-01	4.96E-04	0.00E+00	4.26E-03	4.04E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-02	3.50E-03	4.32E-01	4.70E+01	9.20E-03	6.17E+01	7.01E-03	0.01%	0.18%
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		5.80E+00	1.53E+01	1.64E+00	1.64E+00	1.64E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.70E-02	0.00E+00	2.31E-01	0.00E+00	0.00%	0.00%
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	4.39E-04	mg/kg	#######			1.53E+01	3.82E-02	3.82E-02	3.82E-02	1.22E+00	1.22E+00	0.00E+00	0.00E+00	1.36E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.23E-06	9.13E-07	6.28E-06	1.00E-02	6.28E-04	1.00E-01	6.28E-05	0.00%	0.00%
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.55E+01	1.59E-02	1.59E-02	1.59E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.20E-01	0.00E+00	2.76E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	2.10E-01	mg/kg	#######			1.55E+01	1.89E-02	1.89E-02	1.89E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	6.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.36E-03	4.13E-04	2.84E-03	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	1.43E+00	mg/kg	#######			1.27E+01	8.38E+00	8.38E+00	8.38E+00	1.15E+00	1.15E+00	0.00E+00	0.00E+00	4.43E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.61E-02	2.81E-03	1.93E-02	NA	NA	NA	NA	NA	NA
Iron	2.91E+01	mg/L	0.00E+00	mg/kg	1.28E+04	mg/kg	#######	1.00E+03		7.80E-02	4.00E-03	4.00E-03	4.00E-03	2.07E-03	2.07E-03	8.54E-01	0.00E+00	3.98E+00	1.18E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.59E-01	4.53E-02	1.23E+02	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		2.19E+01		1.41E+01	1.41E+01	1.41E+01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	7.24E-03	mg/L	0.00E+00	mg/kg	7.44E+01	mg/kg	#######	1.50E+03	6.07E-01	3.57E-01	NA	3.97E-02	3.97E-02	1.33E-02	1.33E-02	2.13E-04	0.00E+00	2.31E-02	4.39E-02	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	9.69E-03	1.69E-03	7.86E-02	3.85E+00	2.04E-02	1.16E+01	6.81E-03	0.02%	0.18%
Manganese	9.37E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	2.00E+03	2.10E+00	NA	1.00E-01	1.00E-01	1.00E-01	9.57E-03	9.57E-03	2.75E-02	0.00E+00	0.00E+00	7.58E+00	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.60E+00	9.77E+02	7.78E-03	9.77E+03	7.78E-04	0.01%	0.02%
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	1.10E-01	mg/kg	#######		2.87E+00	4.75E+00	NA	1.02E+00	1.02E+00	1.03E-01	1.03E-01	0.00E+00	0.00E+00	3.41E-05	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	1.11E-04	1.93E-05	1.64E-04	4.50E-01	3.65E-04	9.00E-01	1.82E-04	0.00%	0.00%
Mercury (methyl)	0.00E+00	mg/L	8.29E-02	mg/kg	0.00E+00	mg/kg	#######		2.87E+00	NA	1.16E+00	NA	NA			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	6.40E-03	0.00E+00	6.40E-02	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	3.52E-04	mg/kg	#######			1.62E+01	3.44E-02	3.44E-02	3.44E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.09E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.97E-06	6.94E-07	4.77E-06	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	mg/L	1.10E+01	mg/kg	7.49E+00	mg/kg	#######		2.32E+00	4.73E+00	5.96E-02	6.57E-02	6.57E-02	1.01E-01	1.01E-01	0.00E+00	0.00E+00	2.33E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.41E-03	1.29E-03	1.10E-02	7.74E+01	1.43E-04	1.07E+02	1.03E-04	0.00%	0.00%
Nitrate	7.46E-01	mg/L	7.48E-01	mg/kg	1.08E+00	mg/kg	#######	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	2.19E-02	0.00E+00	3.34E-04	3.22E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.75E-03	3.06E-04	3.24E+00	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	5.84E+01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######	1.07E+03								1.72E+00	0.00E+00	0.00E+00	2.52E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.54E+02	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.53E+01	2.63E-02	2.63E-02	2.63E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	3.51E-03	mg/kg	#######			1.44E+01	1.89E-01	1.89E-01	1.89E-01	1.15E+00	1.15E+00	0.00E+00	0.00E+00	1.09E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.96E-05	6.92E-06	4.76E-05	1.07E+02	4.46E-07	3.20E+02	1.49E-07	0.00%	0.00%
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	2.98E-04	mg/kg	#######			1.52E+01	3.35E-02	3.35E-02	3.35E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	9.26E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.36E-06	5.87E-07	4.04E-06	6.73E+00	6.01E-07	6.73E+01	6.01E-08	0.00%	0.00%
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.49E+01	7.05E-02	7.05E-02	7.05E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E+00	0.00E+00	6.73E+01	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	1.32E-01	mg/kg	#######			1.14E+00	NA	2.56E+01	2.56E+01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	4.11E-05	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	2.15E-04	3.75E-05	2.94E-04	6.50E+01	4.52E-06	1.30E+02	2.26E-06	0.00%	0.00%
Selenium	4.63E-03	mg/L	9.08E-01	mg/kg	6.76E-01	mg/kg	#######	2.05E+02	4.50E+00	1.03E+00	5.02E-01	4.87E-01	4.87E-01	1.95E-01	1.95E-01	1.36E-04	0.00E+00	2.10E-04	3.83E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.29E-03	2.25E-04	5.70E-03	4.40E-01	1.29E-02	1.50E+00	3.80E-03	0.01%	0.10%
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######		4.50E+00		1.70E-01	1.70E-01	1.70E-01			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E+00	0.00E+00	5.44E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	3.28E+01	mg/kg	#######		2.10E+00	2.78E-01	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	0.00E+00	0.00E+00	1.02E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.34E-02	9.32E-03	7.29E-02	NA	NA	NA	NA	NA	NA
Sulfate	5.76E+01	mg/L	7.51E+01	mg/kg	1.04E+02	mg/kg	#######	1.07E+03	2.10E+00	1.14E+00	3.50E-01	3.50E-01	3.50E-01	1.66E-01	1.66E-01	1.69E+00	0.00E+00	3.23E-02	2.49E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.69E-01	2.96E-02	2.51E+02	NA	NA	NA	NA	NA	NA
Thallium	7.55E-04	mg/L	6.00E-01	mg/kg	0.00E+00	mg/kg	#######	1.59E+04	4.50E+00							2.22E-05	0.00E+00	0.00E+00	4.85E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.86E-02	3.50E-01	1.39E-01	1.05E+00	4.62E-02	0.14%	1.19%
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	#######			1.58E+01	4.03E-02	4.03E-02	4.03E-02	1.15E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Vanadium	6.18E-02	mg/L	0.00E+00	mg/kg	2.15E+01	mg/kg	#######	1.07E+03	2.10E+00	8.80E-02	4.00E-03	4.00E-03	4.00E-03	5.92E-03	5.92E-03	1.81E-03	0.00E+00	6.67E-03	2.67E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.24E-03	2.17E-04	2.77E-01	1.14E+01	2.43E-02	3.42E+01	8.09E-03	0.03%	0.21%
Zinc	0.00E+00	mg/L	3.58E+01	mg/kg	6.24E+01	mg/kg	#######	5.00E+03	7.53E+00	5.31E+00	1.01E+00	7.87E-01	7.87E-01	4.51E-01	4.51E-01	0.00E+00	0.00E+00	1.94E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.76E-01	4.81E-02	3.43E-01	1.45E+01	2.37E-02	1.31E+02	2.62E-03	0.02%	0.07%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	9.5E+01	3.7E+00	99.04%	95.35%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	1.8E-06	3.7E-07	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	5.4E-03	5.4E-04	0.01%	0.01%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	8.6E-04	1.1E-04	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	6.3E-04	6.3E-05	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi x Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): [n] See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used a default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text tables.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.26	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0.63	unitless
Bird diet fraction =	0.11	unitless
Soil ingestion rate =	0.000678	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.0339	kg/d
Body weight =	1.126	kg
Home range =	941	acres
Water intake rate =	0.064	L/d
Site Area =	486	acres
Area Use Factor (AUF) =	0.516472	unitless
Exposure Duration (ED) =	1	unitless

Table E-208
Tier 2 COPCs
EEQs and Hazard Indices for the Red-tailed Hawk at LHAAP
Waste Sub-Area/Harrison Bayou Watershed

Chemical	Surface Water Exposure Point Concentration	Units	Sediment Exposure Point Concentration	Units	Surface Soil Exposure Point Concentration	Units	Soil BAF	Fish BAF	Aq. Invert. BAF	Terr. Invert. BAF	Aq. Plant BAF	Terr. Plant BAF	Plant Root BAF	Mammal BAF	Bird BAF
							-----Unitless-----								
1,3,5-Trinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	5.16E+00	mg/kg	1.00E+00			7.53E+00	5.62E+00	5.62E+00	5.62E+00	8.76E-01	8.76E-01
1,3-Dinitrobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.49E-01	mg/kg	1.00E+00			7.58E+00	4.42E+00	4.42E+00	4.42E+00	8.76E-01	8.76E-01
2,3,7,8-TCDD TEQ	8.00E-09	mg/L	4.00E-06	mg/kg	3.16E-05	mg/kg	1.00E+00	2.31E+04	4.67E+00	1.10E+01	3.87E-03	3.87E-03	3.87E-03	4.73E-02	4.73E-02
2,4,6-Trinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	2.47E+02	mg/kg	1.00E+00			7.69E+00	1.60E-01	1.60E-01	1.60E-01	8.76E-01	8.76E-01
2,4-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	5.56E-01	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01
2,6-Dinitrotoluene	0.00E+00	mg/L	0.00E+00	mg/kg	1.24E+00	mg/kg	1.00E+00			7.75E+00	2.13E+00	2.13E+00	2.13E+00	8.76E-01	8.76E-01
4,4'-DDD	0.00E+00	mg/L	0.00E+00	mg/kg	4.55E-04	mg/kg	1.00E+00		4.20E-01	8.95E+00	2.80E-02	2.80E-02	2.80E-02	8.76E-01	8.76E-01
4,4'-DDE	0.00E+00	mg/L	0.00E+00	mg/kg	1.48E-03	mg/kg	1.00E+00		1.23E+01	9.00E+00	1.36E-01	1.36E-01	1.36E-01	9.42E-01	9.42E-01
4,4'-DDT	0.00E+00	mg/L	0.00E+00	mg/kg	1.98E-04	mg/kg	1.00E+00		1.68E+00	9.28E+00	2.80E-02	2.80E-02	2.80E-02	8.87E-01	8.87E-01
Aldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.26E+00	4.86E-03	4.86E-03	4.86E-03	8.76E-01	8.76E-01
alpha-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	2.37E-04	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Aluminum	1.12E+01	mg/L	7.50E+03	mg/kg	6.95E+03	mg/kg	1.00E+00	4.30E+00	4.50E+00	4.30E-02	1.50E-03	1.50E-03	1.50E-03	6.63E-03	6.63E-03
Antimony	0.00E+00	mg/L	0.00E+00	mg/kg	2.06E+00	mg/kg	1.00E+00			3.00E-01	3.70E-02	3.70E-02	3.70E-02	1.11E-01	1.11E-01
Aroclor 1242	0.00E+00	mg/L	0.00E+00	mg/kg	2.22E-03	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01
Aroclor 1248	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.12E+00	8.38E-03	8.38E-03	8.38E-03	8.76E-01	8.76E-01
Aroclor 1254	0.00E+00	mg/L	0.00E+00	mg/kg	4.21E-03	mg/kg	1.00E+00		4.67E+00	9.35E+00	3.58E-03	3.58E-03	3.58E-03	4.98E-01	4.98E-01
Aroclor 1260	0.00E+00	mg/L	0.00E+00	mg/kg	1.94E-03	mg/kg	1.00E+00			9.83E+00	6.43E-04	6.43E-04	6.43E-04	1.67E+00	1.67E+00
Aroclor 1268	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.07E+00	5.26E-01	5.26E-01	5.26E-01	8.76E-01	8.76E-01
Barium	0.00E+00	mg/L	2.32E+02	mg/kg	5.33E+02	mg/kg	1.00E+00	2.00E+01	4.50E+00	9.10E-02	1.56E-01	1.56E-01	1.56E-01	2.00E-02	2.00E-02
Benzoic Acid	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			7.65E+00	3.21E+00	3.21E+00	3.21E+00	8.76E-01	8.76E-01
bis(2-ethylhexyl)phthalate	0.00E+00	mg/L	2.33E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.15E+02	4.67E+00	9.88E+00	5.48E-04	5.48E-04	5.48E-04	8.76E-01	8.76E-01
Butylbenzyl phthalate	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.60E+00	5.62E-02	5.62E-02	5.62E-02	8.76E-01	8.76E-01
Cadmium	0.00E+00	mg/L	1.83E-01	mg/kg	4.73E-01	mg/kg	1.00E+00	1.15E+03	6.00E-01	2.35E+01	1.33E+00	8.67E-01	8.67E-01	6.72E-01	6.72E-01
Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Chromium	9.95E-03	mg/L	0.00E+00	mg/kg	1.46E+01	mg/kg	1.00E+00	3.60E+02		3.06E-01	4.10E-02	4.10E-02	4.10E-02	8.46E-02	8.46E-02
cis-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Copper	1.19E-02	mg/L	6.82E+00	mg/kg	1.09E+01	mg/kg	1.00E+00	1.11E+03	1.56E+00	9.82E-01	6.06E-01	4.54E-01	4.54E-01	8.97E-02	8.97E-02
Dieldrin	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		5.80E+00	8.80E+00	2.40E-02	2.40E-02	2.40E-02	8.76E-01	8.76E-01
Endrin	0.00E+00	mg/L	0.00E+00	mg/kg	3.17E-04	mg/kg	1.00E+00			8.80E+00	2.74E-02	2.74E-02	2.74E-02	1.21E+00	1.21E+00
gamma-Chlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Heptachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.95E+00	1.15E-02	1.15E-02	1.15E-02	8.76E-01	8.76E-01
Hexachlorobenzene	0.00E+00	mg/L	0.00E+00	mg/kg	1.52E-01	mg/kg	1.00E+00			8.95E+00	1.59E-02	1.59E-02	1.59E-02	8.76E-01	8.76E-01
HMX	0.00E+00	mg/L	0.00E+00	mg/kg	1.03E+00	mg/kg	1.00E+00			7.34E+00	8.38E+00	8.38E+00	8.38E+00	8.76E-01	8.76E-01
Iron	1.61E+01	mg/L	0.00E+00	mg/kg	1.12E+04	mg/kg	1.00E+00	2.50E+02		3.60E-02	4.00E-03	4.00E-03	4.00E-03	1.76E-03	1.76E-03
Isobutanol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.67E+00		1.39E+01	1.39E+01	1.39E+01		
Lead	5.66E-03	mg/L	0.00E+00	mg/kg	4.77E+01	mg/kg	1.00E+00	4.48E+02	7.10E-02	3.89E-01	NA	4.83E-02	4.83E-02	1.16E-02	1.16E-02
Manganese	6.92E-01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	2.50E+02	4.20E-01	NA	7.90E-02	7.90E-02	7.90E-02	7.58E-03	7.58E-03
Mercury (inorganic)	0.00E+00	mg/L	0.00E+00	mg/kg	9.02E-02	mg/kg	1.00E+00		1.14E+00	5.42E+00	NA	1.11E+00	1.11E+00	9.15E-02	9.15E-02
Mercury (methyl)	0.00E+00	mg/L	6.13E-02	mg/kg	0.00E+00	mg/kg	1.00E+00		1.14E+00	NA	1.33E+00	NA	NA		
Mirex	0.00E+00	mg/L	0.00E+00	mg/kg	2.47E-04	mg/kg	1.00E+00			9.36E+00	3.44E-03	3.44E-03	3.44E-03	8.76E-01	8.76E-01
Nickel	0.00E+00	mg/L	9.70E+00	mg/kg	7.04E+00	mg/kg	1.00E+00		4.86E-01	1.06E+00	6.15E-02	6.67E-02	6.67E-02	8.71E-02	8.71E-02
Nitrate	4.32E-01	mg/L	4.60E-01	mg/kg	6.12E-01	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Nitrate/Nitrite	2.93E+01	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00	3.01E+02							
Oxychlordane	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.81E+00	2.63E-02	2.63E-02	2.63E-02	8.76E-01	8.76E-01
p-Isopropyltoluene	0.00E+00	mg/L	0.00E+00	mg/kg	3.21E-03	mg/kg	1.00E+00			8.32E+00	1.65E-01	1.65E-01	1.65E-01	8.76E-01	8.76E-01
Pentachloroanisole	0.00E+00	mg/L	0.00E+00	mg/kg	2.24E-04	mg/kg	1.00E+00			8.75E+00	2.74E-02	2.74E-02	2.74E-02	8.76E-01	8.76E-01
Pentachlorophenol	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			8.56E+00	4.25E-02	4.25E-02	4.25E-02	8.76E-01	8.76E-01
Perchlorate	0.00E+00	mg/L	0.00E+00	mg/kg	9.65E-02	mg/kg	1.00E+00			3.00E-01	NA	2.91E+01	2.91E+01	1.11E-01	1.11E-01
Selenium	3.90E-03	mg/L	7.65E-01	mg/kg	5.98E-01	mg/kg	1.00E+00	2.05E+02	4.50E+00	1.07E+00	4.93E-01	4.81E-01	4.81E-01	1.51E-01	1.51E-01
Silver	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00		4.50E+00		1.40E-02	1.40E-02	1.40E-02		
Strontium	0.00E+00	mg/L	0.00E+00	mg/kg	2.45E+01	mg/kg	1.00E+00		4.20E-01	8.70E-02	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Sulfate	4.15E+01	mg/L	5.13E+01	mg/kg	4.14E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	3.00E-01	2.10E-01	2.10E-01	2.10E-01	1.11E-01	1.11E-01
Thallium	5.86E-04	mg/L	4.92E-01	mg/kg	0.00E+00	mg/kg	1.00E+00	7.50E+01	4.50E+00						
trans-Nonachlor	0.00E+00	mg/L	0.00E+00	mg/kg	0.00E+00	mg/kg	1.00E+00			9.09E+00	9.33E-03	9.33E-03	9.33E-03	8.76E-01	8.76E-01
Vanadium	4.29E-02	mg/L	0.00E+00	mg/kg	1.89E+01	mg/kg	1.00E+00	3.01E+02	4.20E-01	4.20E-02	3.60E-03	3.60E-03	3.60E-03	5.49E-03	5.49E-03
Zinc	0.00E+00	mg/L	3.15E+01	mg/kg	4.92E+01	mg/kg	1.00E+00	2.91E+03	1.94E+00	6.23E+00	1.06E+00	8.74E-01	8.74E-01	1.84E-01	1.84E-01

Chemical	EED Surface Water (mg/kg-d)	EED Sediment (mg/kg-d)	EED Soil (mg/kg-d)	EED Fish (mg/kg-d)	EED Aq. Invert. (mg/kg-d)	EED Terr. Invert. (mg/kg-d)	EED Aq. Plants (mg/kg-d)	EED Terr. Plants (mg/kg-d)	EED Plant Roots (mg/kg-d)	EED Mammals (mg/kg-d)	EED Birds (mg/kg-d)	Total EED (mg/kg-d)	NOAEL (mg/kg-d)	EEQ N	LOAEL (mg/kg-d)	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
1,3,5-Trinitrobenzene	0.00E+00	0.00E+00	8.76E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.42E-02	4.22E-03	2.93E-02	NA	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	0.00E+00	0.00E+00	2.54E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.01E-04	1.22E-04	8.48E-04	4.22E-01	2.01E-03	1.27E+00	6.70E-04	0.01%	0.08%
2,3,7,8-TCDD TEQ	1.28E-10	0.00E+00	5.38E-09	4.08E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.01E-09	1.40E-09	4.23E-07	1.40E-05	3.02E-02	1.40E-04	3.02E-03	0.15%	0.38%
2,4,6-Trinitrotoluene	0.00E+00	0.00E+00	4.20E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.16E+00	2.03E-01	1.40E+00	7.00E-02	2.01E+01	1.80E+00	7.80E-01	99.52%	97.22%
2,4-Dinitrotoluene	0.00E+00	0.00E+00	9.45E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.61E-03	4.55E-04	3.16E-03	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	0.00E+00	0.00E+00	2.11E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.84E-03	1.02E-03	7.07E-03	NA	NA	NA	NA	NA	NA
4,4'-DDD	0.00E+00	0.00E+00	7.74E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E-06	3.73E-07	2.59E-06	2.80E-03	9.24E-04	2.80E-02	9.24E-05	0.00%	0.01%
4,4'-DDE	0.00E+00	0.00E+00	2.51E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.44E-06	1.30E-06	9.00E-06	5.80E-02	1.55E-04	5.80E-01	1.55E-05	0.00%	0.00%
4,4'-DDT	0.00E+00	0.00E+00	3.37E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.42E-07	1.64E-07	1.14E-06	2.80E-03	4.07E-04	2.80E-02	4.07E-05	0.00%	0.01%
Aldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
alpha-Chlordane	0.00E+00	0.00E+00	4.02E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E-06	1.94E-07	1.35E-06	2.14E+00	6.29E-07	1.07E+01	1.26E-07	0.00%	0.00%
Aluminum	1.80E-01	0.00E+00	1.18E+00	1.07E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.47E-01	4.31E-02	1.76E+00	1.10E+02	1.60E-02	3.29E+02	5.34E-03	0.08%	0.67%
Antimony	0.00E+00	0.00E+00	3.50E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.22E-03	2.13E-04	1.79E-03	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.00E+00	0.00E+00	3.78E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.04E-05	1.82E-06	1.26E-05	4.10E-01	3.08E-05	1.23E+00	1.03E-05	0.00%	0.00%
Aroclor 1248	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Aroclor 1254	0.00E+00	0.00E+00	7.15E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.12E-05	1.96E-06	1.39E-05	1.80E-01	7.72E-05	1.80E+00	7.72E-06	0.00%	0.00%
Aroclor 1260	0.00E+00	0.00E+00	3.29E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.73E-05	3.03E-06	2.07E-05	1.80E-01	1.15E-04	1.80E+00	1.15E-05	0.00%	0.00%
Aroclor 1268	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-01	0.00E+00	1.80E+00	0.00E+00	0.00%	0.00%
Barium	0.00E+00	0.00E+00	9.06E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.71E-02	9.97E-03	1.58E-01	2.08E+01	7.58E-03	4.17E+01	3.78E-03	0.04%	0.47%
Benzoic Acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
bis(2-ethylhexyl)phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E+00	0.00E+00	3.33E+00	0.00E+00	0.00%	0.00%
Butylbenzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Cadmium	0.00E+00	0.00E+00	8.03E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.70E-03	2.97E-04	2.08E-03	1.45E+00	1.43E-03	2.00E+01	1.04E-04	0.01%	0.01%
Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Chromium	1.60E-04	0.00E+00	2.49E-03	7.91E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.63E-03	1.16E-03	1.83E-02	1.00E+00	1.83E-02	5.00E+00	3.67E-03	0.09%	0.46%
cis-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Copper	1.90E-04	0.00E+00	1.86E-03	2.91E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.25E-03	9.17E-04	3.73E-02	4.70E+01	7.95E-04	6.17E+01	6.05E-04	0.00%	0.08%
Dieldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.70E-02	0.00E+00	2.31E-01	0.00E+00	0.00%	0.00%
Endrin	0.00E+00	0.00E+00	5.39E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.06E-06	3.60E-07	2.47E-06	1.00E-02	2.47E-04	1.00E-01	2.47E-05	0.00%	0.00%
gamma-Chlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.20E-01	0.00E+00	2.76E+00	0.00E+00	0.00%	0.00%
Hexachlorobenzene	0.00E+00	0.00E+00	2.59E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.14E-04	1.25E-04	8.64E-04	NA	NA	NA	NA	NA	NA
HMX	0.00E+00	0.00E+00	1.75E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.84E-03	8.46E-04	5.86E-03	NA	NA	NA	NA	NA	NA
Iron	2.59E-01	0.00E+00	1.90E+00	8.91E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E-01	1.84E-02	1.12E+01	NA	NA	NA	NA	NA	NA
Isobutanol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	NA	NA	NA
Lead	9.08E-05	0.00E+00	8.10E-03	5.60E-03	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	2.97E-03	5.19E-04	1.73E-02	3.85E+00	4.49E-03	1.16E+01	1.50E-03	0.02%	0.19%
Manganese	1.11E-02	0.00E+00	0.00E+00	3.82E-01	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.93E-01	9.77E+02	4.02E-04	9.77E+03	4.02E-05	0.00%	0.01%
Mercury (inorganic)	0.00E+00	0.00E+00	1.53E-05	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	4.42E-05	7.71E-06	6.72E-05	4.50E-01	1.49E-04	9.00E-01	7.46E-05	0.00%	0.01%
Mercury (methyl)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00	6.40E-03	0.00E+00	6.40E-02	0.00E+00	0.00%	0.00%
Mirex	0.00E+00	0.00E+00	4.20E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.16E-06	2.02E-07	1.40E-06	NA	NA	NA	NA	NA	NA
Nickel	0.00E+00	0.00E+00	1.20E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.28E-03	5.73E-04	5.05E-03	7.74E+01	6.53E-05	1.07E+02	4.72E-05	0.00%	0.01%
Nitrate	6.92E-03	0.00E+00	1.04E-04	2.87E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.63E-04	6.34E-05	2.94E-01	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite	4.70E-01	0.00E+00	0.00E+00	1.95E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.99E+01	NA	NA	NA	NA	NA	NA
Oxychlordane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
p-Isopropyltoluene	0.00E+00	0.00E+00	5.44E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.50E-05	2.63E-06	1.82E-05	1.07E+02	1.71E-07	3.20E+02	5.69E-08	0.00%	0.00%
Pentachloroanisole	0.00E+00	0.00E+00	3.81E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E-06	1.84E-07	1.27E-06	6.73E+00	1.89E-07	6.73E+01	1.89E-08	0.00%	0.00%
Pentachlorophenol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E+00	0.00E+00	6.73E+01	0.00E+00	0.00%	0.00%
Perchlorate	0.00E+00	0.00E+00	1.64E-05	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	0.00E+00	5.72E-05	9.99E-06	8.36E-05	6.50E+01	1.29E-06	1.30E+02	6.43E-07	0.00%	0.00%
Selenium	6.26E-05	0.00E+00	1.02E-04	1.77E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.84E-04	8.45E-05	2.50E-03	4.40E-01	5.68E-03	1.50E+00	1.67E-03	0.03%	0.21%
Silver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E+00	0.00E+00	5.44E+01	0.00E+00	0.00%	0.00%
Strontium	0.00E+00	0.00E+00	4.16E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.45E-02	2.54E-03	2.12E-02	NA	NA	NA	NA	NA	NA
Sulfate	6.65E-01	0.00E+00	7.04E-03	2.76E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.46E-02	4.29E-03	2.83E+01	NA	NA	NA	NA	NA	NA
Thallium	9.40E-06	0.00E+00	0.00E+00	9.71E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.06E-04	3.50E-01	3.04E-04	1.05E+00	1.01E-04	0.00%	0.01%
trans-Nonachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+00	0.00E+00	1.07E+01	0.00E+00	0.00%	0.00%
Vanadium	6.87E-04	0.00E+00	3.21E-03	2.85E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.56E-04	9.70E-05	3.30E-02	1.14E+01	2.90E-03	3.42E+01	9.66E-04	0.01%	0.12%
Zinc	0.00E+00	0.00E+00	8.36E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.85E-02	8.47E-03	6.53E-02	1.45E+01	4.51E-03	1.31E+02	4.99E-04	0.02%	0.06%

	EEQ N	EEQ L	Percent Contribution to EEQ N	Percent Contribution to EEQ L
Nitrotoluenes (2,4-DNT, 2,6-DNT, TNT) EEQ:	2.0E+01	7.8E-01	99.52%	97.22%
Chlordane-like chemicals (alpha/gamma chlordane, cis/trans nonachlor, heptachlor, oxychlordane) EEQ	6.3E-07	1.3E-07	0.00%	0.00%
DDX (4,4'-DDD, -DDE, -DDT) EEQ:	1.5E-03	1.5E-04	0.01%	0.02%
Aroclors (Aroclor 1242, 1248, 1254, 1260, 1268) EEQ:	2.2E-04	2.9E-05	0.00%	0.00%
Phthalates (bis-2ethylhexyl and butylbenzyl) EEQ:	0.0E+00	0.0E+00	0.00%	0.00%
Aldrin/Dieldrin/Endrin EEQ:	2.5E-04	2.5E-05	0.00%	0.00%

Intake Equation:

$$Ej = \left(\frac{A}{HR} \left[\sum_{i=1}^{m} \left(\frac{IRi\,x\,Cij}{BW} \right) \right] \right)$$

Where:
Ej = Total Exposure to Chemical
A = Site Area
HR = Home Range
m = Total number of ingested media
i = counter
IRi = Consumption Rate for Medium
Cij = Chemical concentration (j) in medium (I) (mg/kg or mg/L)
BW = Body Weight

Notes:
Tier 1 = Upper-bound EEQ using 95% UCL, upper-bound BAF/BCF (e.g., 90th percentile), avg food intake rates, avg BW, and min home range.
Tier 2 = EEQ using mean EPC, avg BAF/BCF, avg food intake rate, avg BW, and mean home range.
BAF = Bioaccumulation Factor (may be BCF if this is the only value available)
EED = Estimated Exposure Dose
EEQ = Ecological Effects Quotient.
L = LOAEL based; N = NOAEL based
LOAEL = Lowest Observed Adverse Effect Level
NOAEL = No Observed Adverse Effect Level
NA = Not applicable/Not available
BAF (or BCF) values from appropriate text tables (BCF = bioconcentration factor)
Some BAF (or BCF) values based on media regression equations (value in box): n See appropriate text tables for equations.
If BAF/BCF regression equation produced Tier 2 value exceeding maximum Tier 1 BAF/BCF value, Tier 1 value used as default.
LOAEL and NOAEL values from appropriate toxicity summary tables in the text.
UF = Uncertainty Factor for toxicity factor extrapolation, and Adjusted LOAEL or NOAEL = LOAEL/UF or NOAEL/UF
A "0" entry in the exposure concentration column indicates this chemical not selected as a COPEC for this medium.
Receptor diet data and home range data from appropriate text tables.
Exposure point concentrations (EPCs) from appropriate text tables.

Species-Specific Factors

Factor	Value	Units
Terrestrial plant diet fraction =	0	unitless
Aquatic plant diet fraction =	0	unitless
Plant root diet fraction =	0	unitless
Fish diet fraction =	0.26	unitless
Aq. Invert diet fraction =	0	unitless
Terr. Invert diet fraction =	0	unitless
Mammal diet fraction =	0.63	unitless
Bird diet fraction =	0.11	unitless
Soil ingestion rate =	0.000678	kg/d
Sediment ingestion rate =	0	kg/d
Food ingestion rate =	0.0339	kg/d
Body weight =	1.126	kg
Home range =	1722	acres
Water intake rate =	0.064	L/d
Site Area =	486	acres
Area Use Factor (AUF) =	0.28223	unitless
Exposure Duration (ED) =	1	unitless