

# **LONGHORN ARMY AMMUNITION PLANT KARNACK, TEXAS**

## **ADMINISTRATIVE RECORD**

**Volume 1 of 1**

**2012**

**Bate Stamp Numbers**

**00113423 – 00113608**

**Prepared for**

**Department of the Army  
Longhorn Army Ammunition Plant**

**1976 – 2012**

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

VOLUME 1 of 1

2012

- A. Title: Correspondence–Harrison County Records Filing of Sites LHAAP-49, Pistol Range, and Sumps from LHAAP-48 (Sump094, Sump095, Sump096, Sump097, Sump 099, Sump100, Sump101, WRSump001, WRSump002, and WRSump003), and LHAAP-58 (Sump102, Sump103, Sump104, Sump105, and Sump123); Longhorn Army Ammunition Plant, Karnack, Texas  
Author(s): U.S. Army  
Recipient: Office of Harrison County Clerk  
Date: January 19, 2012  
Bate Stamp: 00113423–00113531
- B. Title: Meeting Minutes–Longhorn AAP Monthly Managers' Meeting  
Author(s): Shaw Environmental, Inc., Houston, Texas  
Recipient: All Stakeholders  
Date: January 19, 2012  
Bate Stamp: 00113532–00113543
- C. Title: Meeting Minutes–LHAAP Restoration Advisory Board (RAB) Meeting  
Author(s): Shaw Environmental, Inc., Houston, Texas  
Recipient: All Stakeholders  
Date: January 19, 2012  
Bate Stamp: 00113544–00113602
- D. Title: Meeting Minutes–Longhorn AAP Monthly Managers' Meeting  
Author(s): Shaw Environmental, Inc., Houston, Texas  
Recipient: All Stakeholders  
Date: February 21, 2012  
Bate Stamp: 00113603–00113608

2012-000000704

\*\*\*DO NOT REMOVE THIS PAGE – IT IS A PART OF THIS INSTRUMENT\*\*\*

## MISCELLANEOUS

7 Pages

FILED AND RECORDED – OPR	CLERKS NOTES
On: <u>01/19/2012 10:41 AM</u>	
Document Number: <u>2012-000000704</u>	
Receipt No: <u>1200645</u>	
Amount: \$ <u>36.00</u>	
By: <u>Ann Turner</u> , Deputy	
<b>Patsy Cox, County Clerk Harrison County, Texas</b>	

STATE OF TEXAS  
COUNTY OF HARRISONI hereby certify that this instrument was filed on the date and time stamped hereon by me  
and was duly recorded in the Official Public Records of Harrison County, Texas.

Patsy Cox, Harrison County Clerk

Record and Return To:

SHAW ENVIRONMENTAL & INFRASTRUCTION GROUP  
1401 ENCLAVE PARKWAY, SUITE 250

HOUSTON, TX 77077

STATE OF TEXAS

HARRISON COUNTY

INDUSTRIAL SOLID WASTE  
NOTICE OF NONRESIDENTIAL LAND USE

KNOW ALL MEN BY THESE PRESENTS THAT:

Pursuant to the Rules of the Texas Commission on Environmental Quality (TCEQ) pertaining to Industrial Solid Waste Management, this document is hereby filed in the Public Records of Harrison County, Texas, in compliance with the recordation requirements of said rules:

I

The U.S. Army, Department of Defense, has performed a remediation of the land described herein. LHAAP-49 is a former Acid Storage location at the former Longhorn Army Ammunition Plant (LHAAP). LHAAP was placed on the National Priorities List (NPL) during August 1990. After its listing on the NPL, the U.S. Army, United States Environmental Protection Agency (USEPA), and TCEQ (formerly known as Texas Water Commission) entered into an agreement under the Comprehensive Environmental Response Compensation, and Liability Act (CERCLA) Section 120 for remedial activities. The CERCLA Section 120 Agreement, referred to as the Federal Facility Agreement (FFA) became effective on December 30, 1991. LHAAP-49 is considered an NPL listed site, and remedial activities at LHAAP-49 were performed in accordance with the FFA requirements.

LHAAP-49 is located in the west-central portion of LHAAP. LHAAP-49 is the former Acid Storage Area, which was used from 1942 to 1945 for storage and formulation of acids and acid mixtures in support of trinitrotoluene production during World War II. Nitric acid and sulfuric acid were manufactured and handled in large quantities in this area. A no further action Record of Decision for LHAAP-49 was signed by USEPA in 2010 establishing no remedy was required. Further information may be found in the Notice of Registration No. 30990 files, which are available for inspection upon request at TCEQ, Central File Room Customer Service Center, Building E, 12100 Park 35 Circle, Austin, Texas, 78753, (512) 239-2900, Monday through Friday 8:00 a.m. to 5:00 p.m. or



in the Administrative Record available at the Marshall Public Library, 300 S. Alamo Blvd, Marshall, Texas 75670, (903) 935-4465, Monday through Thursday 10:00 a.m. to 8 p.m., Friday and Saturday 10:00 a.m. to 5:30 p.m.

The TCEQ requires certain persons to provide recordation in the real property records to notify the public of the conditions of the land and/or the occurrence of remediation. This notification is not a representation or warranty by the TCEQ of the suitability of this land for any purpose.

## II

LHAAP-49 is a 30.540 acre tract located in Harrison County, Texas, near the town of Karnack, being more particularly described with survey plat and metes and bounds established in Exhibit A.

The United States Department of the Army has undertaken careful environmental study of LHAAP-49 and USEPA and TCEQ concluded that no further investigation or action is required.

Limited monitoring of LHAAP-49 will take place in the form of Letters of Certification from the Army or the Transferee to TCEQ every five years to document that the use of LHAAP-49 is consistent with the non-residential use scenarios evaluated in the risk assessment. Future use of the parcel is intended as a national wildlife refuge consistent with industrial or recreational activities and not for residential purposes. For purposes of this certification, residential use includes, but is not limited to, single family or multi-family residences; child care facilities; nursing home or assisted living facilities; and any type of educational purpose for children/young adults in grades kindergarten through 12.

## III

The owner of the site is the Department of the Army, and its address where more specific information may be obtained is as follows:

ATTN: DAIM-ODB-LO (R. Zeiler)  
Post Office Box 220  
Ratcliff, AR 72951

or

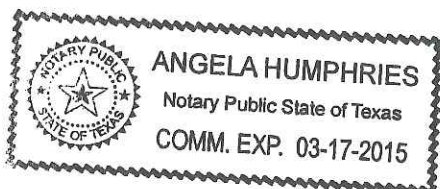
Assistant Chief of Staff for Installation Management  
ATTN: DAIM-ODB (T. Lederle)  
600 Army Pentagon  
Washington D.C. 20310-0600

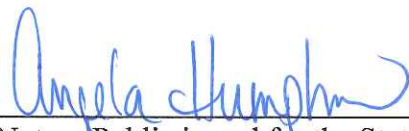
  
\_\_\_\_\_  
Rose M. Zeiler  
Longhorn AAP Site Manager

EXECUTED this the 21 th day of July, 2011.

BEFORE ME, on this the 21 th day of July, personally appeared Rose M. Zeiler, of the United States Army, United States Department of Defense, known to me to be the person and agent of said agency whose name is subscribed to the foregoing instrument, and she acknowledged to me that she executed the same for the purposes and in the capacity therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 21 day of July, 2011.



  
\_\_\_\_\_  
Notary Public in and for the State of Texas,  
County of Harrison

FIELD NOTES DESCRIPTION OF  
LHAAP-49  
LONGHORN ARMY AMMUNITION PLANT  
HARRISON COUNTY, TEXAS

The herein described tract of land is located in Harrison County, Texas, near the town of Karnack, being 30.540 acres of land out of the Longhorn Ordnance Works Reservation (also known as the Longhorn Army Ammunition Plant, Karnack, Texas), said tract being more particularly described as follows :

Surveyor's Note : All bearings and distances herein (unless labeled surface distance) are based on the Texas State Plane Coordinate System, North Central Zone, Code 4202, NAD 1983 (92). The scale factor applied equals 0.9998768897, and is based on surface traverse using electronic total station between type "G" Corps of Engineers monuments "HMX-3" (N=6956487.252 feet E=3303483.509 feet) and "HMX-5" (N=6958206.213 feet E=3305201.721 feet). Said traverse indicates a surface distance of 2430.748 feet between said monuments. The computed land area is based on grid (State Plane) distances.

BEGINNING at a 60d nail set for the Southmost corner of this tract, said nail being in asphalt pavement at the intersection of 6th Street and 4th Street, from which nail the monument "HMX-3" referenced above bears N 09deg00'02"E 74.61' ,

THENCE N 46deg42'14"W crossing some of said asphalt pavement, then generally along 4th Street's Northeast edge of asphalt, then crossing a curved section of 4th Street's asphalt, and continuing beyond 4th Street's asphalt, for a total distance of 509.81', to a 60d nail set for the Southmost West corner of this tract,

THENCE N 45deg04'42"E eventually crossing 4th Street's asphalt, then generally along 4th Street's Southeast edge of asphalt, for a total distance of 1323.80', to a 60d nail set (in the Southeast edge of said asphalt pavement) for the Westerly reentrant corner of this tract,

THENCE N 45deg22'03"W crossing 4th Street's asphalt pavement and continuing for a total distance of 308.18' to a point (in the Southeasterly edge of flowing water [May 3, 2011] of Goose Prairie Creek) for the Northmost West corner of this tract, from which point a 1/2" iron rod with Tom Fidler orange plastic cap set for reference bears S 45deg22'03"E 11.34', said rod being at the top of the Southeasterly bank of Goose Prairie Creek,

THENCE N 47deg40'44"E 331.25' along a N.W. B.L. of this tract to a point (in the Southeasterly edge of flowing water [May 3, 2011] of Goose Prairie Creek) for the Westmost North corner of this tract, from which point a 1/2" iron rod with Tom Fidler orange plastic cap set for reference bears S 44deg45'45"E 13.46', said rod being at the top of the Southeasterly bank of Goose Prairie Creek,

THENCE S 44deg45'45"E along a N.E. B.L. of this tract, and eventually crossing 4th Street's asphalt pavement, for a total distance of 292.85' to a 60d nail set in the Southeast edge of said asphalt pavement for the Northerly reentrant corner of this tract,

THENCE N 44deg47'09"E generally along 4th Street's Southeast edge of asphalt pavement, then entering said pavement at the

intersection of 4th Street and Avenue "C", for a total distance of 781.21' to a 60d nail set in said asphalt pavement for the Eastmost North corner of this tract,

THENCE S 45deg47'29"E crossing some of said pavement, then generally along the Southwest edge of the asphalt pavement of Avenue "C", then entering said pavement at the intersection of Avenue "C" and 6th Street, for a total distance of 507.27' to a 60d nail set for the Eastmost corner of this tract, from which the monument "HMX-5" referenced above bears N 13deg12'58"E 77.94' ,

THENCE S 44deg55'17"W crossing some of said pavement, then generally along the Northwest edge of the asphalt pavement of 6th Street, then entering said pavement at the aforementioned intersection of 6th Street and 4th Street, for a total distance of 2424.55' to this POINT OF BEGINNING.

This tract contains 30.540 acres, more or less.

I, Tom A. Fidler, registered professional land surveyor No. 3940 in the State of Texas, do hereby certify that this field notes description is the result of a survey made on the ground and under my supervision.

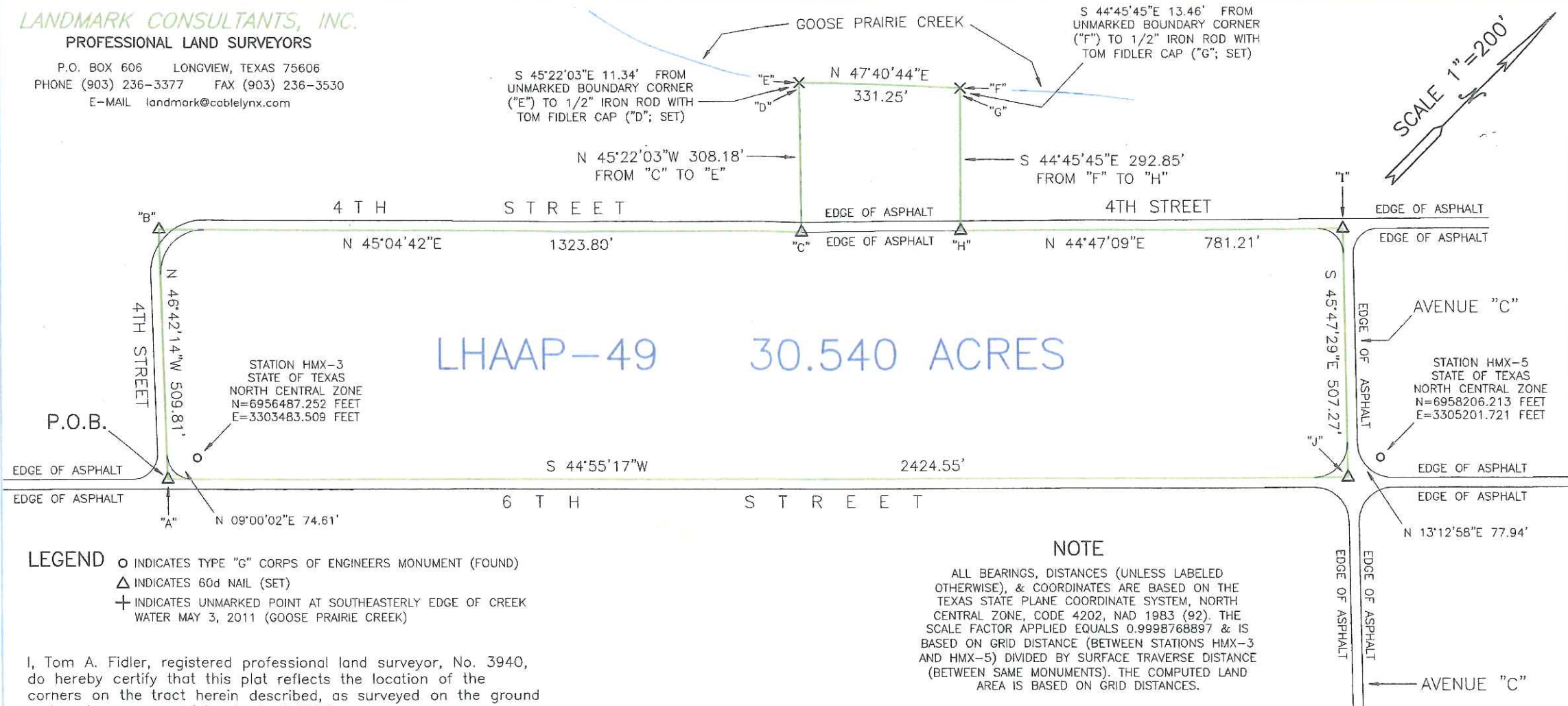



Tom A. Fidler, R.P.L.S. Number 3940

LANDMARK CONSULTANTS, INC.

## PROFESSIONAL LAND SURVEYORS

P.O. BOX 606 LONGVIEW, TEXAS 75606  
PHONE (903) 236-3377 FAX (903) 236-3530  
E-MAIL [landmark@cablelynx.com](mailto:landmark@cablelynx.com)



### LEGEND

- INDICATES TYPE "G" CORPUS OF ENGINEERS MONUMENT (FOUND)  
 △ INDICATES 60d NAIL (SET)  
 + INDICATES UNMARKED POINT AT SOUTHEASTERLY EDGE OF CREEK  
 WATER MAY 3, 2011 (GOOSE PRAIRIE CREEK)

I, Tom A. Fidler, registered professional land surveyor, No. 3940, do hereby certify that this plat reflects the location of the corners on the tract herein described, as surveyed on the ground and under my supervision in April 2011.

Witness my hand and seal May 5, 2011.

NOTE

ALL BEARINGS, DISTANCES (UNLESS LABELED OTHERWISE), & COORDINATES ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, NORTH CENTRAL ZONE, CODE 4202, NAD 1983 (92). THE SCALE FACTOR APPLIED EQUALS 0.9998768897 & IS BASED ON GRID DISTANCE (BETWEEN STATIONS HMX-3 AND HMX-5) DIVIDED BY SURFACE TRAVERSE DISTANCE (BETWEEN SAME MONUMENTS). THE COMPUTED LAND AREA IS BASED ON GRID DISTANCES.

## COORDINATE TABLE

POINT	NORTH	EAST
A	6956413.564	3303471.837
B	6956763.174	3303100.790
C	6957697.967	3304038.137
D(ROD)	6957906.516	3303826.894
E	6957914.483	3303818.824
F	6958137.506	3304063.741
G(ROD)	6958127.951	3304073.216
H	6957929.573	3304269.956
I	6958484.036	3304802.288
J	6958130.332	3305183.901

FIELD NOTES DESCRIPTION  
IS ON SEPARATE SHEETS

LHAAP-49  
(30.540 ACRES)  
LONGHORN ARMY AMMUNITION PLANT  
HARRISON COUNTY, TEXAS

JOB #1104040	0407088.CRD	M.PTS M.LEG
MAY 5, 2011	1103025M.DWG	DRAWN BY JTJ



Tom A. Fidler, Registered Professional Land Surveyor, No. 3940

2012-000000705

\*\*\*DO NOT REMOVE THIS PAGE – IT IS A PART OF THIS INSTRUMENT\*\*\*

## MISCELLANEOUS

6 Pages

FILED AND RECORDED – OPR	CLERKS NOTES
<b>On:</b> <u>01/19/2012 10:41 AM</u>	
<b>Document Number:</b> <u>2012-000000705</u>	
<b>Receipt No:</b> <u>1200645</u>	
<b>Amount:</b> \$ <u>32.00</u>	
<b>By:</b> <u>Ann Turner</u> , Deputy	
<b>Patsy Cox, County Clerk Harrison County, Texas</b>	

STATE OF TEXAS  
COUNTY OF HARRISONI hereby certify that this instrument was filed on the date and time stamped hereon by me  
and was duly recorded in the Official Public Records of Harrison County, Texas.

Patsy Cox, Harrison County Clerk

Record and Return To:

SHAW ENVIRONMENTAL & INFRASTRUCTURE GROUP  
1401 ENCLAVE PARKWAY, SUITE 250

HOUSTON, TX 77077

STATE OF TEXAS

HARRISON COUNTY

INDUSTRIAL SOLID WASTE  
NOTICE OF NONRESIDENTIAL LAND USE

KNOW ALL MEN BY THESE PRESENTS THAT:

Pursuant to the Rules of the Texas Commission on Environmental Quality (TCEQ) pertaining to Industrial Solid Waste Management, this document is hereby filed in the Public Records of Harrison County, Texas, in compliance with the recordation requirements of said rules:

I

The U.S. Army, Department of Defense, has performed a remediation of the land described herein. The site, the former Pistol Range is located at the former Longhorn Army Ammunition Plant (LHAAP). LHAAP was placed on the National Priorities List (NPL) during August 1990. After its listing on the NPL, the U.S. Army, United States Environmental Protection Agency (USEPA), and TCEQ (formerly known as Texas Water Commission) entered into an agreement under the Comprehensive Environmental Response Compensation, and Liability Act (CERCLA) Section 120 for remedial activities. The CERCLA Section 120 Agreement, referred to as the Federal Facility Agreement (FFA) became effective on December 30, 1991. The former Pistol Range is an NPL site and a removal action was performed in 2009 in accordance with the FFA requirements. As a result of the removal action, the lead agency has determined that no further CERCLA action is necessary at the former Pistol Range to protect public health, welfare or the environment.

The former Pistol Range is located in the southeastern portion of LHAAP, approximately 280 feet south of Avenue Q at the end of Robert Avenue. The site is the eastern portion of a rectangular field and is approximately 110 feet north to south by 150 feet east to west. The former Pistol Range was known to have been used by LHAAP security personnel for small arms target qualification and recertification. The former Pistol Range was established in the 1950s and was used intermittently through 2004. A no further action Record of Decision for the former Pistol Range was signed by USEPA in 2010

establishing no remedy was required. Further information may be found in the Notice of Registration No. 30990 files, which are available for inspection upon request at TCEQ, Central File Room Customer Service Center, Building E, 12100 Park 35 Circle, Austin, Texas, 78753, (512) 239-2900, Monday through Friday 8:00 a.m. to 5:00 p.m. or in the Administrative Record available at the Marshall Public Library, 300 S. Alamo Blvd, Marshall, Texas 75670, (903) 935-4465, Monday through Thursday 10:00 a.m. to 8 p.m., Friday and Saturday 10:00 a.m. to 5:30 p.m.

The TCEQ requires certain persons to provide recordation in the real property records to notify the public of the conditions of the land and/or the occurrence of remediation. This notification is not a representation or warranty by the TCEQ of the suitability of this land for any purpose.

## II

The former Pistol Range is a 0.3879 acre tract located in Harrison County, Texas, near the town of Karnack, being more particularly described with survey plat and metes and bounds established in Exhibit A.

The United States Department of the Army has undertaken careful environmental study of the former Pistol Range and USEPA and TCEQ concluded that no further investigation or action is required.

Limited monitoring of the former Pistol Range will take place in the form of Letters of Certification from the Army or the Transferee to TCEQ every five years to document that the use of the former Pistol Range is consistent with the nonresidential use scenarios evaluated in the risk assessment. Future use of the parcel is intended as a national wildlife refuge consistent with industrial or recreational activities and not for residential purposes. For purposes of this certification, residential use includes, but is not limited to, single family or multi-family residences; child care facilities; nursing home or assisted living facilities; and any type of educational purpose for children/young adults in grades kindergarten through 12.

## III

The owner of the site is the Department of the Army, and its address where more specific information may be obtained is as follows:

ATTN: DAIM-ODB-LO (R. Zeiler)  
Post Office Box 220  
Ratcliff, AR 72951



or

Assistant Chief of Staff for Installation Management  
ATTN: DAIM-ODB (T. Lederle)  
600 Army Pentagon  
Washington D.C. 20310-0600

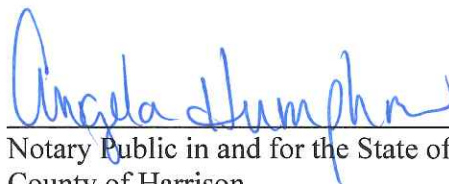
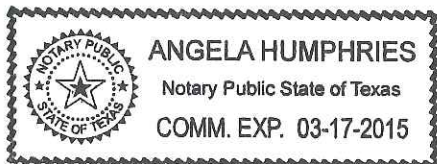


Rose M. Zeiler  
Longhorn AAP Site Manager

EXECUTED this the 21 th day of July, 2011.

BEFORE ME, on this the 21 th day of July, personally appeared Rose M. Zeiler, of the United States Army, United States Department of Defense, known to me to be the person and agent of said agency whose name is subscribed to the foregoing instrument, and she acknowledged to me that she executed the same for the purposes and in the capacity therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 21 day of July, 2011.



Notary Public in and for the State of Texas,  
County of Harrison

FIELD NOTES DESCRIPTION OF  
FORMER PISTOL RANGE  
LONGHORN ARMY AMMUNITION PLANT  
HARRISON COUNTY, TEXAS

The herein described tract of land is located in Harrison County, Texas, near the town of Karnack, being 16,897 square feet of land out of the Longhorn Ordnance Works Reservation (also known as the Longhorn Army Ammunition Plant, Karnack, Texas), said tract being more particularly described as follows :

Surveyor's Note : All bearings and distances herein (unless labeled surface distance) are based on the Texas State Plane Coordinate System, North Central Zone, Code 4202, NAD 1983 (92). The scale factor applied equals 0.9999146277, and is based on surface traverse using electronic total station between type "G" Corps of Engineers monuments "C-19-2" (N=6952844.320 feet E=3312839.019 feet) and "3-95" (N=6952411.298 feet E=3314136.438 feet). Said traverse indicates a surface distance of 1367.890 feet between said monuments. The computed land area is based on grid (State Plane) distances.

Commencing at monument "3-95" referenced above,

(As used herein, the abbreviation I.R.C. indicates 1/2" iron rod with R.P.L.S. #3940 orange plastic cap)

THENCE S 45deg51'27"E 855.98' to an I.R.C. set for the S.W.C. of this tract and this POINT OF BEGINNING,

THENCE N 00deg00'20"W 107.99' along the W.B.L. of this tract to an I.R.C. set for this tract's N.W.C. ,

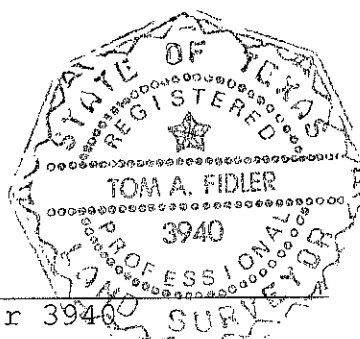
THENCE N 89deg59'47"E 155.96' along the N.B.L. of this tract to an I.R.C. set for this tract's N.E.C. ,

THENCE S 00deg32'56"E 107.99' along the E.B.L. of this tract to an I.R.C. set for this tract's S.E.C. ,

THENCE S 89deg59'43"W 156.98' along the S.B.L. of this tract to this POINT OF BEGINNING.

This tract contains 16,897 square feet, more or less.

I, Tom A. Fidler, registered professional land surveyor No. 3940 in the State of Texas, do hereby certify that this field notes description is the result of a survey made on the ground and under my supervision.

Tom A. Fidler, R.P.L.S. Number 3940

## COORDINATE TABLE

POINT	NORTH	EAST
A	6951923.143	3314750.686
B	6951815.153	3314750.697
C	6951815.166	3314907.681
D	6951923.153	3314906.647

STATION C-19-2  
STATE OF TEXAS  
NORTH CENTRAL ZONE  
N=6952844.320 FEET  
E=3312839.019 FEET

BEARING SOURCE BETWEEN  
STATION C-19-2 & STATION 3-95  
IS S 71°32'35.6"E 1367.773'  
(SURFACE TRAVERSE USING  
ELECTRONIC TOTAL STATION  
INDICATES 1367.890')

STATION 3-95  
STATE OF TEXAS  
NORTH CENTRAL ZONE  
N=6952411.298 FEET  
E=3314136.438 FEET

## LEGEND

- INDICATES TYPE "G" CORPS OF ENGINEERS MONUMENT (FOUND)  
△ INDICATES 1/2" IRON ROD WITH R.P.L.S. #3940 CAP (SET)

LANDMARK CONSULTANTS, INC.

PROFESSIONAL LAND SURVEYORS

P.O. BOX 606 LONGVIEW, TEXAS 75606  
PHONE (903) 236-3377 FAX (903) 236-3530  
E-MAIL landmark@cablelynx.com

## NOTE

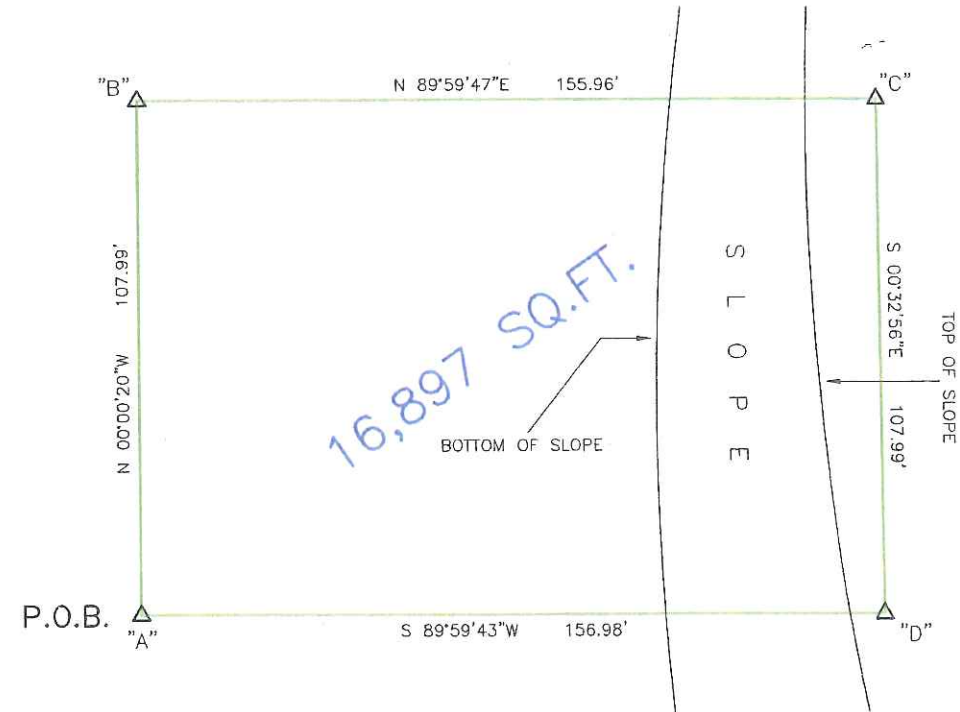
ALL BEARINGS, DISTANCES (UNLESS LABELED OTHERWISE), & COORDINATES ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, NORTH CENTRAL ZONE, CODE 4202, NAD 1983 (92). THE SCALE FACTOR APPLIED EQUALS 0.9999146277 & IS BASED ON SURFACE TRAVERSE BETWEEN STATIONS C-19-2 AND 3-95. THE COMPUTED LAND AREA IS BASED ON GRID DISTANCES.

I, Tom A. Fidler, registered professional land surveyor, No. 3940, do hereby certify that this plat reflects the location of the corners on the tract herein described, as surveyed on the ground and under my supervision in April 2011.

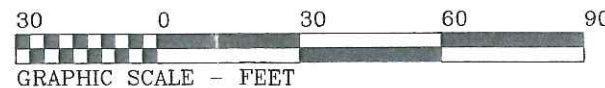
Witness my hand and seal May 2, 2011.



Tom A. Fidler, Registered Professional Land Surveyor, No. 3940



SCALE 1"=30'



FIELD NOTES DESCRIPTION  
IS ON SEPARATE SHEETS

FORMER PISTOL RANGE  
(16,897 SQUARE FEET)  
LONGHORN ARMY AMMUNITION PLANT  
HARRISON COUNTY, TEXAS

JOB #1104040	0407088.CRD	L.PTS L.LEG
MAY 2, 2011	1103025L.DWG	DRAWN BY JTJ

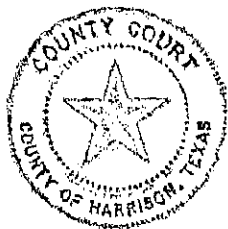
2012-000000706

\*\*\*DO NOT REMOVE THIS PAGE – IT IS A PART OF THIS INSTRUMENT\*\*\*

## MISCELLANEOUS

6 Pages

FILED AND RECORDED – OPR	CLERKS NOTES
<b>On:</b> <u>01/19/2012 10:41 AM</u>	
<b>Document Number:</b> <u>2012-000000706</u>	
<b>Receipt No:</b> <u>1200645</u>	
<b>Amount:</b> \$ <u>32.00</u>	
<b>By:</b> <u>Ann Turner</u> , Deputy	
<b>Patsy Cox, County Clerk Harrison County, Texas</b>	

STATE OF TEXAS  
COUNTY OF HARRISONI hereby certify that this instrument was filed on the date and time stamped hereon by me  
and was duly recorded in the Official Public Records of Harrison County, Texas.

Patsy Cox, Harrison County Clerk

Record and Return To:

SHAW ENVIRONMENTAL & INFRASTRUCTION GROUP  
1401 ENCLAVE PARKWAY, SUITE 250

HOUSTON, TX 77077

STATE OF TEXAS

HARRISON COUNTY

INDUSTRIAL SOLID WASTE  
NOTICE OF NONRESIDENTIAL LAND USE

KNOW ALL MEN BY THESE PRESENTS THAT:

Pursuant to the Rules of the Texas Commission on Environmental Quality (TCEQ) pertaining to Industrial Solid Waste Management, this document is hereby filed in the Public Records of Harrison County, Texas in compliance with the recordation requirements of said rules:

I

The U.S. Army, Department of Defense, has performed a remediation of the land described herein. Sump094 (called Sump 094 on the attached Exhibit A) is part of LHAAP-35/36. Sump094 is a former sump location near Building 16-Y physically located within site boundary of LHAAP-48 of the former Longhorn Army Ammunition Plant (LHAAP). LHAAP was placed on the National Priorities List (NPL) during August 1990. After its listing on the NPL, the U.S. Army, United States Environmental Protection Agency (USEPA), and TCEQ (formerly known as Texas Water Commission) entered into an agreement under the Comprehensive Environmental Response Compensation, and Liability Act (CERCLA) Section 120 for remedial activities. The CERCLA Section 120 Agreement, referred to as the Federal Facility Agreement (FFA), became effective on December 30, 1991. Although there are many sites at LHAAP that are specifically NPL listed, LHAAP-35/36, of which Sump094 is a part, is not considered an NPL site. Environmental activities at LHAAP-35/36 progressed through the site investigation, at which point it was agreed by the Army and the TCEQ, the lead regulatory agency, no significant releases had occurred and the site could be closed under Texas Administrative Code (TAC) Risk Reduction Rule Standard 2.

LHAAP-35/36 is a collection of 125 process sumps and 20 waste rack sumps found in multiple locations across the installation and predominantly associated with process areas. All of the production buildings had sumps that collected wash down water. Sumps (including Sump094) were also associated with wash racks (waste rack sumps) where containers were cleaned and stored. Further information may be found in the Notice of Registration No. 30990 files, which are available for inspection upon request at

TCEQ, Central File Room Customer Service Center, Building E, 12100 Park 35 Circle, Austin, Texas, 78753, (512) 239-2900, Monday through Friday 8:00 a.m. to 5:00 p.m. or in the Administrative Record available at the Marshall Public Library, 300 S. Alamo Blvd, Marshall, Texas 75670, (903) 935-4465, Monday through Thursday 10:00 a.m. to 8 p.m., Friday and Saturday 10:00 a.m. to 5:30 p.m.

The TCEQ requires certain persons to provide recordation in the real property records to notify the public of the conditions of the land and/or the occurrence of remediation. This notification is not a representation or warranty by the TCEQ of the suitability of this land for any purpose.

## II

The Sump094 parcel is 64 square feet, more or less, or 0.00146 acre tract located in Harrison County, Texas, near the town of Karnack, being more particularly described with survey plat and metes and bounds established in Exhibit A.

The United States Department of the Army has undertaken careful environmental study of the Sump094 site and USEPA and TCEQ concluded that no further investigation or action is required. Contaminants in soil samples from Sump094 meet non-residential soil criteria in accordance with 30TAC§335.560(b).

Limited monitoring of Sump094 will take place in the form of Letters of Certification from the Army or the Transferee to TCEQ every five years to document that the use of Sump094 is consistent with the non-residential use scenarios evaluated in the risk assessment. Future use of the parcel is intended as a national wildlife refuge consistent with industrial or recreational activities and not for residential purposes. For purposes of this certification, residential use includes, but is not limited to, single family or multi-family residences; child care facilities; nursing home or assisted living facilities; and any type of educational purpose for children/young adults in grades kindergarten through 12.

## III

The owner of the site is the Department of the Army, and its address where more specific information may be obtained is as follows:

ATTN: DAIM-ODB-LO (R. Zeiler)  
Post Office Box 220  
Ratcliff, AR 72951

or

Assistant Chief of Staff for Installation Management  
ATTN: DAIM-ODB (T. Lederle)  
600 Army Pentagon  
Washington D.C. 20310-0600

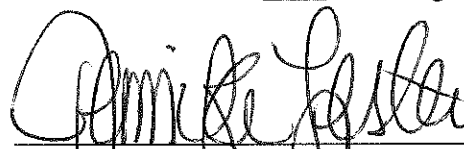
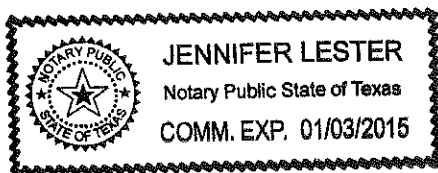


Rose M. Zeiler  
Longhorn AAP Site Manager

EXECUTED this the \_\_\_\_\_th day of \_\_\_\_\_, 2011.

BEFORE ME, on this the 30th day of June, personally appeared Rose M. Zeiler, of the United States Army, United States Department of Defense, known to me to be the person and agent of said agency whose name is subscribed to the foregoing instrument, and she acknowledged to me that she executed the same for the purposes and in the capacity therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 30 day of June, 2011.



Notary Public in and for the State of Texas,  
County of Harrison

FIELD NOTES DESCRIPTION OF  
SUMP 094  
LONGHORN ARMY AMMUNITION PLANT  
HARRISON COUNTY, TEXAS

The herein described tract of land is located in Harrison County, Texas, near the town of Karnack, being 64.0 square feet of land out of the Longhorn Ordnance Works Reservation (also known as the Longhorn Army Ammunition Plant, Karnack, Texas), said tract being more particularly described as follows :

Surveyor's Note : All bearings and distances herein (unless labeled surface distance) are based on the Texas State Plane Coordinate System, North Central Zone, Code 4202, NAD 1983 (92). The scale factor applied equals 0.9998954238, and is based on surface traverse using electronic total station between type "G" Corps of Engineers monuments "TYLER-1" (N=6958507.460 feet E=3314279.499 feet) and "TYLER-2" (N=6957832.181 feet E=3315168.140 feet). Said traverse indicates a surface distance of 1116.219 feet between said monuments. The computed land area is based on surface distances.

Commencing at monument "TYLER-1" referenced above,

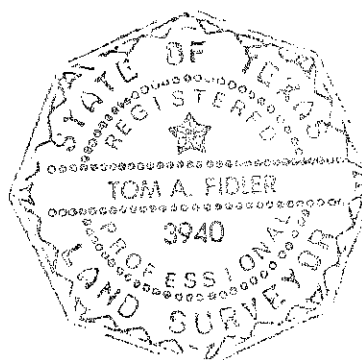
THENCE N 07deg59'31"W 569.56' to a point for the Southmost corner of this sump and this POINT OF BEGINNING,

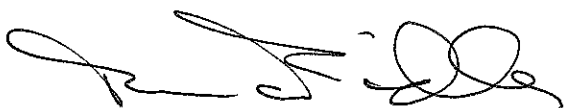
THENCE along the boundary of this tract the following four courses :

- (01) N 37deg59'57"W 8.00' to a point for the Westmost corner of this tract,
- (02) N 52deg00'03"E 8.00' to a point for the Northmost corner of this tract,
- (03) S 37deg59'57"E 8.00' to a point for the Eastmost corner of this tract,
- (04) S 52deg00'03"W 8.00' to this POINT OF BEGINNING.

This tract contains 64.0 square feet, more or less.

I, Tom A. Fidler, registered professional land surveyor No. 3940 in the State of Texas, do hereby certify that this field notes description is the result of a survey made on the ground and under my supervision.



  
Tom A. Fidler, R.P.L.S. Number 3940

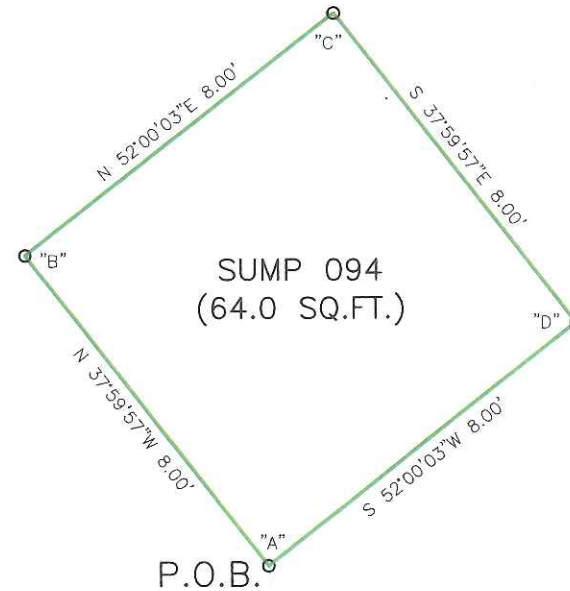


## NOTE

ALL BEARINGS, DISTANCES (UNLESS LABELED OTHERWISE), & COORDINATES ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, NORTH CENTRAL ZONE, CODE 4202, NAD 1983 (92). THE SCALE FACTOR APPLIED EQUALS 0.9998954238 & IS BASED ON SURFACE TRAVERSE BETWEEN STATIONS TYLER-1 & TYLER-2. THE COMPUTED LAND AREA IS BASED ON SURFACE DISTANCES.

## NOTES:

- ✕ INDICATES TYPE "G" CORPS OF ENGINEERS MONUMENT (FOUND)  
 ○ INDICATES UNMARKED CORNER OF SUMP



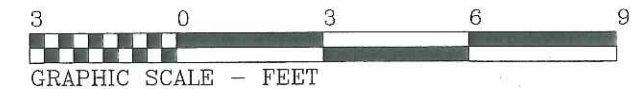
## COORDINATE TABLE

POINT	NORTH	EAST
A	6959071.485	3314200.311
B	6959077.789	3314195.385
C	6959082.715	3314201.689
D	6959076.411	3314206.615

I, Tom A. Fidler, registered professional land surveyor, No. 3940, do hereby certify that this plat reflects the location of the corners on the tract herein described, as surveyed on the ground and under my supervision in February & March 2011.

Witness my hand and seal March 14, 2011.

SCALE 1"=3'



FIELD NOTES DESCRIPTION  
IS ON SEPARATE SHEET



BEARING SOURCE  
 S 52°46'07.6"E 1116.102'  
 (SURFACE TRAVERSE USING  
 ELECTRONIC TOTAL STATION  
 INDICATES 1116.219')

STATION TYLER-2  
 STATE OF TEXAS  
 NORTH CENTRAL ZONE  
 N=6957832.181 FEET  
 E=3315168.140 FEET

SUMP 094  
 (64.0 SQUARE FEET)  
 LONGHORN ARMY AMMUNITION PLANT  
 HARRISON COUNTY, TEXAS

JOB #0407088	0407088.CRD	H.PTS	H.LEG
03/14/2011	1103025H.DWG	DRAWN BY	JTJ

Tom A. Fidler, Registered Professional Land Surveyor, No. 3940

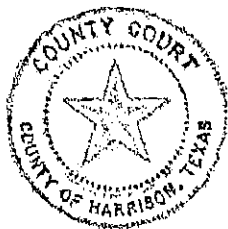
2012-000000707

\*\*\*DO NOT REMOVE THIS PAGE – IT IS A PART OF THIS INSTRUMENT\*\*\*

## MISCELLANEOUS

6 Pages

FILED AND RECORDED – OPR	CLERKS NOTES
On: <u>01/19/2012 10:41 AM</u>	
Document Number: <u>2012-000000707</u>	
Receipt No: <u>1200645</u>	
Amount: \$ <u>32.00</u>	
By: <u>Ann Turner</u> , Deputy	
<b>Patsy Cox, County Clerk Harrison County, Texas</b>	

STATE OF TEXAS  
COUNTY OF HARRISONI hereby certify that this instrument was filed on the date and time stamped hereon by me  
and was duly recorded in the Official Public Records of Harrison County, Texas.

Patsy Cox, Harrison County Clerk

Record and Return To:

SHAW ENVIRONMENTAL & INFRASTRUCTION GROUP  
1401 ENCLAVE PARKWAY, SUITE 250

HOUSTON, TX 77077

STATE OF TEXAS

HARRISON COUNTY

INDUSTRIAL SOLID WASTE  
NOTICE OF NONRESIDENTIAL LAND USE

KNOW ALL MEN BY THESE PRESENTS THAT:

Pursuant to the Rules of the Texas Commission on Environmental Quality (TCEQ) pertaining to Industrial Solid Waste Management, this document is hereby filed in the Public Records of Harrison County, Texas in compliance with the recordation requirements of said rules:

I

The U.S. Army, Department of Defense, has performed a remediation of the land described herein. Sump095 (called Sump 095 on the attached Exhibit A) is part of LHAAP-35/36. Sump095 is a former sump location near Building 34-Y physically located within site boundary of LHAAP-48 of the former Longhorn Army Ammunition Plant (LHAAP). LHAAP was placed on the National Priorities List (NPL) during August 1990. After its listing on the NPL, the U.S. Army, United States Environmental Protection Agency (USEPA), and TCEQ (formerly known as Texas Water Commission) entered into an agreement under the Comprehensive Environmental Response Compensation, and Liability Act (CERCLA) Section 120 for remedial activities. The CERCLA Section 120 Agreement, referred to as the Federal Facility Agreement (FFA), became effective on December 30, 1991. Although there are many sites at LHAAP that are specifically NPL listed, LHAAP-35/36, of which Sump095 is a part, is not considered an NPL site. Environmental activities at LHAAP-35/36 progressed through the site investigation, at which point it was agreed by the Army and the TCEQ, the lead regulatory agency, no significant releases had occurred and the site could be closed under Texas Administrative Code (TAC) Risk Reduction Rule Standard 2.

LHAAP-35/36 is a collection of 125 process sumps and 20 waste rack sumps found in multiple locations across the installation and predominantly associated with process areas. All of the production buildings had sumps that collected wash down water. Sumps (including Sump095) were also associated with wash racks (waste rack sumps) where containers were cleaned and stored. Further information may be found in the Notice of Registration No. 30990 files, which are available for inspection upon request at

TCEQ, Central File Room Customer Service Center, Building E, 12100 Park 35 Circle, Austin, Texas, 78753, (512) 239-2900, Monday through Friday 8:00 a.m. to 5:00 p.m. or in the Administrative Record available at the Marshall Public Library, 300 S. Alamo Blvd, Marshall, Texas 75670, (903) 935-4465, Monday through Thursday 10:00 a.m. to 8 p.m., Friday and Saturday 10:00 a.m. to 5:30 p.m.

The TCEQ requires certain persons to provide recordation in the real property records to notify the public of the conditions of the land and/or the occurrence of remediation. This notification is not a representation or warranty by the TCEQ of the suitability of this land for any purpose.

## II

The Sump095 parcel is 69.6 square feet, more or less, or 0.00159 acre tract located in Harrison County, Texas, near the town of Karnack, being more particularly described with survey plat and metes and bounds established in Exhibit A.

The United States Department of the Army has undertaken careful environmental study of the Sump095 site and USEPA and TCEQ concluded that no further investigation or action is required. Contaminants in soil samples from Sump095 meet non-residential soil criteria in accordance with 30TAC§335.560(b).

Limited monitoring of Sump095 will take place in the form of Letters of Certification from the Army or the Transferee to TCEQ every five years to document that the use of Sump095 is consistent with the non-residential use scenarios evaluated in the risk assessment. Future use of the parcel is intended as a national wildlife refuge consistent with industrial or recreational activities and not for residential purposes. For purposes of this certification, residential use includes, but is not limited to, single family or multi-family residences; child care facilities; nursing home or assisted living facilities; and any type of educational purpose for children/young adults in grades kindergarten through 12.

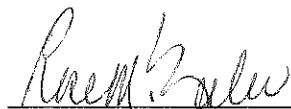
## III

The owner of the site is the Department of the Army, and its address where more specific information may be obtained is as follows:

ATTN: DAIM-ODB-LO (R. Zeiler)  
Post Office Box 220  
Ratcliff, AR 72951

or

Assistant Chief of Staff for Installation Management  
ATTN: DAIM- ODB (T. Lederle)  
600 Army Pentagon  
Washington D.C. 20310-0600

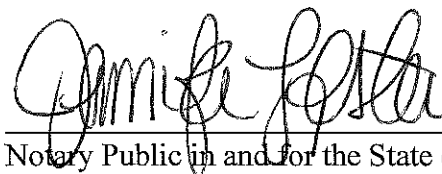
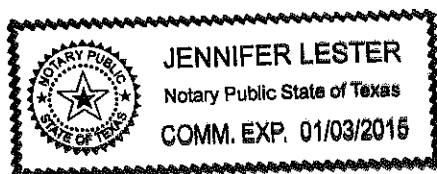


Rose M. Zeiler  
Longhorn AAP Site Manager

EXECUTED this the 30th day of June, 2011.

BEFORE ME, on this the 30th day of June, personally appeared Rose M. Zeiler, of the United States Army, United States Department of Defense, known to me to be the person and agent of said agency whose name is subscribed to the foregoing instrument, and she acknowledged to me that she executed the same for the purposes and in the capacity therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 30 day of June, 2011.



Notary Public in and for the State of Texas,  
County of Harrison

FIELD NOTES DESCRIPTION OF  
SUMP 095  
LONGHORN ARMY AMMUNITION PLANT  
HARRISON COUNTY, TEXAS

The herein described tract of land is located in Harrison County, Texas, near the town of Karnack, being 69.6 square feet of land out of the Longhorn Ordnance Works Reservation (also known as the Longhorn Army Ammunition Plant, Karnack, Texas), said tract being more particularly described as follows :

Surveyor's Note : All bearings and distances herein (unless labeled surface distance) are based on the Texas State Plane Coordinate System, North Central Zone, Code 4202, NAD 1983 (92). The scale factor applied equals 0.9998954238, and is based on surface traverse using electronic total station between type "G" Corps of Engineers monuments "TYLER-1" (N=6958507.460 feet E=3314279.499 feet) and "TYLER-2" (N=6957832.181 feet E=3315168.140 feet). Said traverse indicates a surface distance of 1116.219 feet between said monuments. The computed land area is based on surface distances.

Commencing at monument "TYLER-1" referenced above,

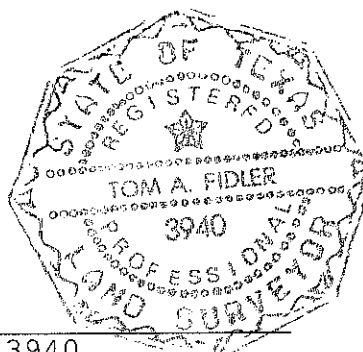
THENCE N 43deg48'28"E 725.22' to a point for the Southmost corner of this sump and this POINT OF BEGINNING,


THENCE along the boundary of this tract the following eight courses :

- (01) N 37deg59'57"W 12.00' to a point for tract corner,
- (02) S 52deg00'03"W 3.10' to a point for tract corner,
- (03) N 37deg59'57"W 6.00' to a point for the Westmost corner of this tract,
- (04) N 52deg00'03"E 8.00' to a point for the Northmost corner of this tract,
- (05) S 37deg59'57"E 6.00' to a point for tract corner,
- (06) S 52deg00'03"W 3.10' to a point for tract corner,
- (07) S 37deg59'57"E 12.00' to a point for the Eastmost corner of this tract,
- (08) S 52deg00'03"W 1.80' to this POINT OF BEGINNING.

This tract contains 69.6 square feet, more or less.

I, Tom A. Fidler, registered professional land surveyor No. 3940 in the State of Texas, do hereby certify that this field notes description is the result of a survey made on the ground and under my supervision.



  
Tom A. Fidler, R.P.L.S. Number 3940

## NOTES:

- X INDICATES TYPE "G" CORPS OF ENGINEERS MONUMENT (FOUND)  
 O INDICATES UNMARKED CORNER OF SUMP

## NOTE

ALL BEARINGS, DISTANCES (UNLESS LABELED OTHERWISE), & COORDINATES ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, NORTH CENTRAL ZONE, CODE 4202, NAD 1983 (92). THE SCALE FACTOR APPLIED EQUALS 0.9998954238 & IS BASED ON SURFACE TRAVERSE BETWEEN STATIONS TYLER-1 & TYLER-2. THE COMPUTED LAND AREA IS BASED ON SURFACE DISTANCES.

## COORDINATE TABLE

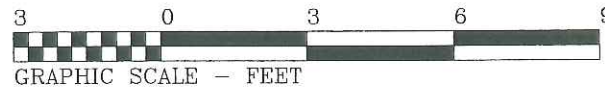
POINT	NORTH	EAST
A	6959030.826	3314781.526
B	6959040.282	3314774.138
C	6959038.373	3314771.695
D	6959043.101	3314768.001
E	6959048.027	3314774.305
F	6959043.299	3314777.999
G	6959041.390	3314775.556
H	6959031.934	3314782.944

FIELD NOTES DESCRIPTION  
IS ON SEPARATE SHEET

SUMP 095  
 (69.6 SQUARE FEET)  
 LONGHORN ARMY AMMUNITION PLANT  
 HARRISON COUNTY, TEXAS

JOB #0407088	0407088.CRD	F.PTS	F.LEG
03/14/2011	1103025F.DWG	DRAWN BY	JTJ

SCALE 1"=3'



I, Tom A. Fidler, registered professional land surveyor, No. 3940, do hereby certify that this plat reflects the location of the corners on the tract herein described, as surveyed on the ground and under my supervision in February & March 2011.

Witness my hand and seal March 14, 2011.



Tom A. Fidler, Registered Professional Land Surveyor, No. 3940

STATION TYLER-1  
 STATE OF TEXAS  
 NORTH CENTRAL ZONE  
 N=6958507.460 FEET  
 E=3314279.499 FEET

BEARING SOURCE  
 S 52°46'07.6"E 1116.102'  
 (SURFACE TRAVERSE USING  
 ELECTRONIC TOTAL STATION  
 INDICATES 1116.219')

STATION TYLER-2  
 STATE OF TEXAS  
 NORTH CENTRAL ZONE  
 N=6957832.181 FEET  
 E=3315168.140 FEET

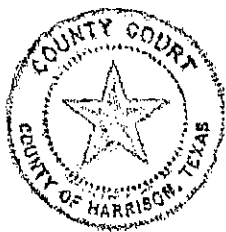
2012-000000708

\*\*\*DO NOT REMOVE THIS PAGE – IT IS A PART OF THIS INSTRUMENT\*\*\*

## MISCELLANEOUS

6 Pages

FILED AND RECORDED – OPR	CLERKS NOTES
<b>On:</b> <u>01/19/2012 10:41 AM</u>	
<b>Document Number:</b> <u>2012-000000708</u>	
<b>Receipt No:</b> <u>1200645</u>	
<b>Amount:</b> \$ <u>32.00</u>	
<b>By:</b> <u>Ann Turner</u> , Deputy	
<b>Patsy Cox, County Clerk Harrison County, Texas</b>	

STATE OF TEXAS  
COUNTY OF HARRISONI hereby certify that this instrument was filed on the date and time stamped hereon by me  
and was duly recorded in the Official Public Records of Harrison County, Texas.

Patsy Cox, Harrison County Clerk

Record and Return To:

SHAW ENVIRONMENTAL & INFRASTRUCTION GROUP  
1401 ENCLAVE PARKWAY, SUITE 250

HOUSTON, TX 77077



STATE OF TEXAS

HARRISON COUNTY

INDUSTRIAL SOLID WASTE  
NOTICE OF NONRESIDENTIAL LAND USE

KNOW ALL MEN BY THESE PRESENTS THAT:

Pursuant to the Rules of the Texas Commission on Environmental Quality (TCEQ) pertaining to Industrial Solid Waste Management, this document is hereby filed in the Public Records of Harrison County, Texas in compliance with the recordation requirements of said rules:

I

The U.S. Army, Department of Defense, has performed a remediation of the land described herein. Sump096 (called Sump 096 on the attached Exhibit A) is part of LHAAP-35/36. Sump096 is a former sump location near Building 34-Y physically located within site boundary of LHAAP-48 of the former Longhorn Army Ammunition Plant (LHAAP). LHAAP was placed on the National Priorities List (NPL) during August 1990. After its listing on the NPL, the U.S. Army, United States Environmental Protection Agency (USEPA), and TCEQ (formerly known as Texas Water Commission) entered into an agreement under the Comprehensive Environmental Response Compensation, and Liability Act (CERCLA) Section 120 for remedial activities. The CERCLA Section 120 Agreement, referred to as the Federal Facility Agreement (FFA), became effective on December 30, 1991. Although there are many sites at LHAAP that are specifically NPL listed, LHAAP-35/36, of which Sump096 is a part, is not considered an NPL site. Environmental activities at LHAAP-35/36 progressed through the site investigation, at which point it was agreed by the Army and the TCEQ, the lead regulatory agency, no significant releases had occurred and the site could be closed under Texas Administrative Code (TAC) Risk Reduction Rule Standard 2.

LHAAP-35/36 is a collection of 125 process sumps and 20 waste rack sumps found in multiple locations across the installation and predominantly associated with process areas. All of the production buildings had sumps that collected wash down water. Sumps (including Sump096) were also associated with wash racks (waste rack sumps) where containers were cleaned and stored. Further information may be found in the Notice of Registration No. 30990 files, which are available for inspection upon request at

TCEQ, Central File Room Customer Service Center, Building E, 12100 Park 35 Circle, Austin, Texas, 78753, (512) 239-2900, Monday through Friday 8:00 a.m. to 5:00 p.m. or in the Administrative Record available at the Marshall Public Library, 300 S. Alamo Blvd, Marshall, Texas 75670, (903) 935-4465, Monday through Thursday 10:00 a.m. to 8 p.m., Friday and Saturday 10:00 a.m. to 5:30 p.m.

The TCEQ requires certain persons to provide recordation in the real property records to notify the public of the conditions of the land and/or the occurrence of remediation. This notification is not a representation or warranty by the TCEQ of the suitability of this land for any purpose.

## II

The Sump096 parcel is 64 square feet, more or less, or 0.00146 acre tract located in Harrison County, Texas, near the town of Karnack, being more particularly described with survey plat and metes and bounds established in Exhibit A.

The United States Department of the Army has undertaken careful environmental study of the Sump096 site and USEPA and TCEQ concluded that no further investigation or action is required. Contaminants in soil samples from Sump096 meet non-residential soil criteria in accordance with 30TAC§335.560(b).

Limited monitoring of Sump096 will take place in the form of Letters of Certification from the Army or the Transferee to TCEQ every five years to document that the use of Sump096 is consistent with the non-residential use scenarios evaluated in the risk assessment. Future use of the parcel is intended as a national wildlife refuge consistent with industrial or recreational activities and not for residential purposes. For purposes of this certification, residential use includes, but is not limited to, single family or multi-family residences; child care facilities; nursing home or assisted living facilities; and any type of educational purpose for children/young adults in grades kindergarten through 12.

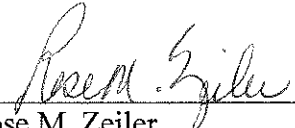
## III

The owner of the site is the Department of the Army, and its address where more specific information may be obtained is as follows:

ATTN: DAIM-ODB-LO (R. Zeiler)  
Post Office Box 220  
Ratcliff, AR 72951

or

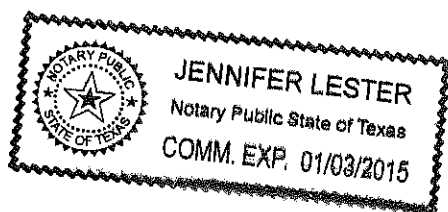
Assistant Chief of Staff for Installation Management  
ATTN: DAIM- ODB (T. Lederle)  
600 Army Pentagon  
Washington D.C. 20310-0600

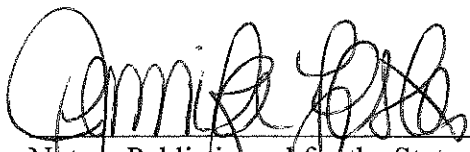
  
\_\_\_\_\_  
Rose M. Zeiler  
Longhorn AAP Site Manager

EXECUTED this the 30th day of June, 2011.

BEFORE ME, on this the 30th day of June, personally appeared Rose M. Zeiler, of the United States Army, United States Department of Defense, known to me to be the person and agent of said agency whose name is subscribed to the foregoing instrument, and she acknowledged to me that she executed the same for the purposes and in the capacity therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 30 day of June, 2011.



  
\_\_\_\_\_  
Notary Public in and for the State of Texas,  
County of Harrison

FIELD NOTES DESCRIPTION OF  
SUMP 096  
LONGHORN ARMY AMMUNITION PLANT  
HARRISON COUNTY, TEXAS

The herein described tract of land is located in Harrison County, Texas, near the town of Karnack, being 64.0 square feet of land out of the Longhorn Ordnance Works Reservation (also known as the Longhorn Army Ammunition Plant, Karnack, Texas), said tract being more particularly described as follows :

Surveyor's Note : All bearings and distances herein (unless labeled surface distance) are based on the Texas State Plane Coordinate System, North Central Zone, Code 4202, NAD 1983 (92). The scale factor applied equals 0.9998954238, and is based on surface traverse using electronic total station between type "G" Corps of Engineers monuments "TYLER-1" (N=6958507.460 feet E=3314279.499 feet) and "TYLER-2" (N=6957832.181 feet E=3315168.140 feet). Said traverse indicates a surface distance of 1116.219 feet between said monuments. The computed land area is based on surface distances.

Commencing at monument "TYLER-1" referenced above,

THENCE N 36deg34'53"E 696.04' to a point for the Southmost corner of this sump and this POINT OF BEGINNING,

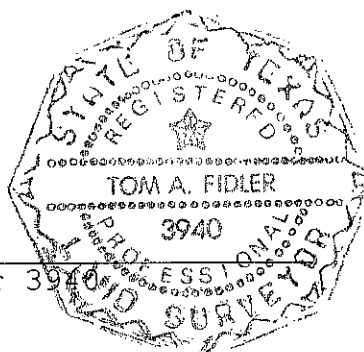
THENCE along the boundary of this tract the following four courses :

- (01) N 37deg59'57"W 8.00' to a point for the Westmost corner of this tract,
- (02) N 52deg00'03"E 8.00' to a point for the Northmost corner of this tract,
- (03) S 37deg59'57"E 8.00' to a point for the Eastmost corner of this tract,
- (04) S 52deg00'03"W 8.00' to this POINT OF BEGINNING.

This tract contains 64.0 square feet, more or less.

I, Tom A. Fidler, registered professional land surveyor No. 3940 in the State of Texas, do hereby certify that this field notes description is the result of a survey made on the ground and under my supervision.

Tom A. Fidler, R.P.L.S. Number 3940



## NOTES:

- ✕ INDICATES TYPE "G" CORPS OF ENGINEERS MONUMENT (FOUND)  
 ○ INDICATES UNMARKED CORNER OF SUMP

## NOTE

ALL BEARINGS, DISTANCES (UNLESS LABELED OTHERWISE), & COORDINATES ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, NORTH CENTRAL ZONE, CODE 4202, NAD 1983 (92). THE SCALE FACTOR APPLIED EQUALS 0.9998954238 & IS BASED ON SURFACE TRAVERSE BETWEEN STATIONS TYLER-1 & TYLER-2. THE COMPUTED LAND AREA IS BASED ON SURFACE DISTANCES.

## COORDINATE TABLE

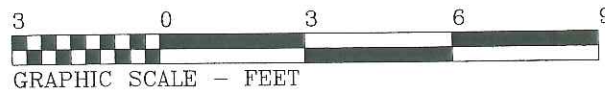
POINT	NORTH	EAST
A	6959066.385	3314694.311
B	6959072.689	3314689.385
C	6959077.615	3314695.689
D	6959071.311	3314700.615

FIELD NOTES DESCRIPTION  
IS ON SEPARATE SHEET

SUMP 096  
 (64.0 SQUARE FEET)  
 LONGHORN ARMY AMMUNITION PLANT  
 HARRISON COUNTY, TEXAS

JOB #0407088	0407088.CRD	G.PTS	G.LEG
03/14/2011	1103025G.DWG	DRAWN BY	JTJ

SCALE 1"=3'



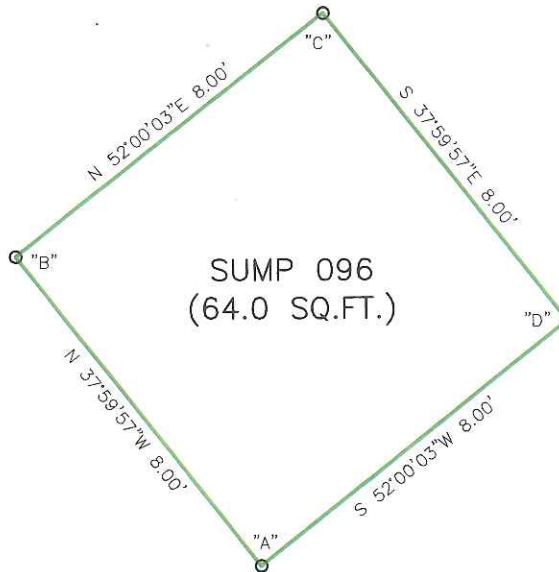
I, Tom A. Fidler, registered professional land surveyor, No. 3940, do hereby certify that this plat reflects the location of the corners on the tract herein described, as surveyed on the ground and under my supervision in February & March 2011.

Witness my hand and seal March 14, 2011.

Tom A. Fidler, Registered Professional Land Surveyor, No. 3940



SUMP 096  
 (64.0 SQ.FT.)



P.O.B.

STATION TYLER-1  
 STATE OF TEXAS  
 NORTH CENTRAL ZONE  
 N=6958507.460 FEET  
 E=3314279.499 FEET

BEARING SOURCE  
 S 52°46'07.6"E 1116.102'  
 (SURFACE TRAVERSE USING  
 ELECTRONIC TOTAL STATION  
 INDICATES 1116.219')

STATION TYLER-2  
 STATE OF TEXAS  
 NORTH CENTRAL ZONE  
 N=6957832.181 FEET  
 E=3315168.140 FEET

2012-000000709

\*\*\*DO NOT REMOVE THIS PAGE – IT IS A PART OF THIS INSTRUMENT\*\*\*

## MISCELLANEOUS

6 Pages

FILED AND RECORDED – OPR	CLERKS NOTES
<b>On:</b> <u>01/19/2012 10:41 AM</u>	
<b>Document Number:</b> <u>2012-000000709</u>	
<b>Receipt No:</b> <u>1200645</u>	
<b>Amount:</b> \$ <u>32.00</u>	
<b>By:</b> <u>Ann Turner</u> , Deputy	
<b>Patsy Cox, County Clerk Harrison County, Texas</b>	

STATE OF TEXAS  
COUNTY OF HARRISON

I hereby certify that this instrument was filed on the date and time stamped hereon by me  
and was duly recorded in the Official Public Records of Harrison County, Texas.

Patsy Cox, Harrison County Clerk

---

**Record and Return To:**

SHAW ENVIRONMENTAL & INFRASTRUCTION GROUP  
1401 ENCLAVE PARKWAY, SUITE 250

HOUSTON, TX 77077

STATE OF TEXAS

HARRISON COUNTY

INDUSTRIAL SOLID WASTE  
NOTICE OF NONRESIDENTIAL LAND USE

KNOW ALL MEN BY THESE PRESENTS THAT:

Pursuant to the Rules of the Texas Commission on Environmental Quality (TCEQ) pertaining to Industrial Solid Waste Management, this document is hereby filed in the Public Records of Harrison County, Texas in compliance with the recordation requirements of said rules:

I

The U.S. Army, Department of Defense, has performed a remediation of the land described herein. Sump097 (called Sump 097 on the attached Exhibit A) is part of LHAAP-35/36. Sump097 is a former sump location near Building 38-Y physically located within site boundary of LHAAP-48 of the former Longhorn Army Ammunition Plant (LHAAP). LHAAP was placed on the National Priorities List (NPL) during August 1990. After its listing on the NPL, the U.S. Army, United States Environmental Protection Agency (USEPA), and TCEQ (formerly known as Texas Water Commission) entered into an agreement under the Comprehensive Environmental Response Compensation, and Liability Act (CERCLA) Section 120 for remedial activities. The CERCLA Section 120 Agreement, referred to as the Federal Facility Agreement (FFA), became effective on December 30, 1991. Although there are many sites at LHAAP that are specifically NPL listed, LHAAP-35/36, of which Sump097 is a part, is not considered an NPL site. Environmental activities at LHAAP-35/36 progressed through the site investigation, at which point it was agreed by the Army and the TCEQ, the lead regulatory agency, no significant releases had occurred and the site could be closed under Texas Administrative Code (TAC) Risk Reduction Rule Standard 2.

LHAAP-35/36 is a collection of 125 process sumps and 20 waste rack sumps found in multiple locations across the installation and predominantly associated with process areas. All of the production buildings had sumps that collected wash down water. Sumps (including Sump097) were also associated with wash racks (waste rack sumps) where containers were cleaned and stored. Further information may be found in the Notice of Registration No. 30990 files, which are available for inspection upon request at

TCEQ, Central File Room Customer Service Center, Building E, 12100 Park 35 Circle, Austin, Texas, 78753, (512) 239-2900, Monday through Friday 8:00 a.m. to 5:00 p.m. or in the Administrative Record available at the Marshall Public Library, 300 S. Alamo Blvd, Marshall, Texas 75670, (903) 935-4465, Monday through Thursday 10:00 a.m. to 8 p.m., Friday and Saturday 10:00 a.m. to 5:30 p.m.

The TCEQ requires certain persons to provide recordation in the real property records to notify the public of the conditions of the land and/or the occurrence of remediation. This notification is not a representation or warranty by the TCEQ of the suitability of this land for any purpose.

## II

The Sump097 parcel is 76.6 square feet, more or less, or 0.00175 acre tract located in Harrison County, Texas, near the town of Karnack, being more particularly described with survey plat and metes and bounds established in Exhibit A.

The United States Department of the Army has undertaken careful environmental study of the Sump097 site and USEPA and TCEQ concluded that no further investigation or action is required. Contaminants in soil samples from Sump097 meet non-residential soil criteria in accordance with 30TAC§335.560(b).

Limited monitoring of Sump097 will take place in the form of Letters of Certification from the Army or the Transferee to TCEQ every five years to document that the use of Sump097 is consistent with the non-residential use scenarios evaluated in the risk assessment. Future use of the parcel is intended as a national wildlife refuge consistent with industrial or recreational activities and not for residential purposes. For purposes of this certification, residential use includes, but is not limited to, single family or multi-family residences; child care facilities; nursing home or assisted living facilities; and any type of educational purpose for children/young adults in grades kindergarten through 12.

## III

The owner of the site is the Department of the Army, and its address where more specific information may be obtained is as follows:

ATTN: DAIM-ODB-LO (R. Zeiler)  
Post Office Box 220  
Ratcliff, AR 72951

or



Assistant Chief of Staff for Installation Management  
ATTN: DAIM-ODB (T. Lederle)  
600 Army Pentagon  
Washington D.C. 20310-0600

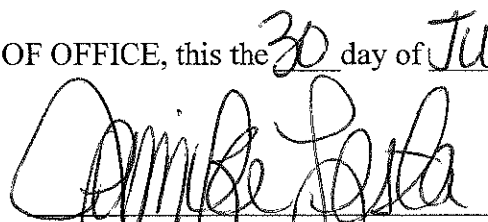
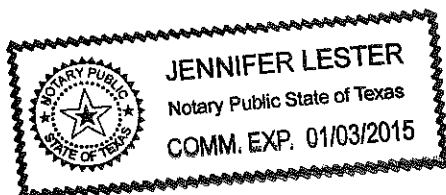


Rose M. Zeiler  
Longhorn AAP Site Manager

EXECUTED this the 30 th day of June, 2011.

BEFORE ME, on this the 30 th day of June, personally appeared Rose M. Zeiler, of the United States Army, United States Department of Defense, known to me to be the person and agent of said agency whose name is subscribed to the foregoing instrument, and she acknowledged to me that she executed the same for the purposes and in the capacity therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 30 day of June, 2011.



Notary Public in and for the State of Texas,  
County of Harrison

FIELD NOTES DESCRIPTION OF  
SUMP 097  
LONGHORN ARMY AMMUNITION PLANT  
HARRISON COUNTY, TEXAS

The herein described tract of land is located in Harrison County, Texas, near the town of Karnack, being 76.6 square feet of land out of the Longhorn Ordnance Works Reservation (also known as the Longhorn Army Ammunition Plant, Karnack, Texas), said tract being more particularly described as follows :

Surveyor's Note : All bearings and distances herein (unless labeled surface distance) are based on the Texas State Plane Coordinate System, North Central Zone, Code 4202, NAD 1983 (92). The scale factor applied equals 0.9998954238, and is based on surface traverse using electronic total station between type "G" Corps of Engineers monuments "TYLER-1" (N=6958507.460 feet E=3314279.499 feet) and "TYLER-2" (N=6957832.181 feet E=3315168.140 feet). Said traverse indicates a surface distance of 1116.219 feet between said monuments. The computed land area is based on surface distances.

Commencing at monument "TYLER-1" referenced above,

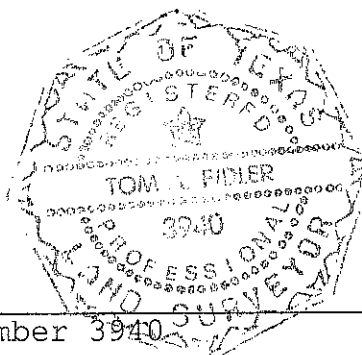
THENCE N 33deg53'28"E 842.86' to this POINT OF BEGINNING, said point being at the Southmost corner of the external face of the concrete which defines this sump,


THENCE along the external face of the concrete which defines this sump the following four courses, each course ending at a corner of the external face of said concrete :

- (01) N 58deg18'32"W 6.20', being this sump's Westmost corner,
- (02) N 37deg53'34"E 12.45', being this sump's Northmost corner,
- (03) S 58deg06'49"E 6.18', being this sump's Eastmost corner,
- (04) S 37deg47'39"W 12.43', being the aforementioned POINT OF BEGINNING.

This tract contains 76.6 square feet, more or less.

I, Tom A. Fidler, registered professional land surveyor No. 3940 in the State of Texas, do hereby certify that this field notes description is the result of a survey made on the ground and under my supervision.



  
Tom A. Fidler, R.P.L.S. Number 3940

NOTE

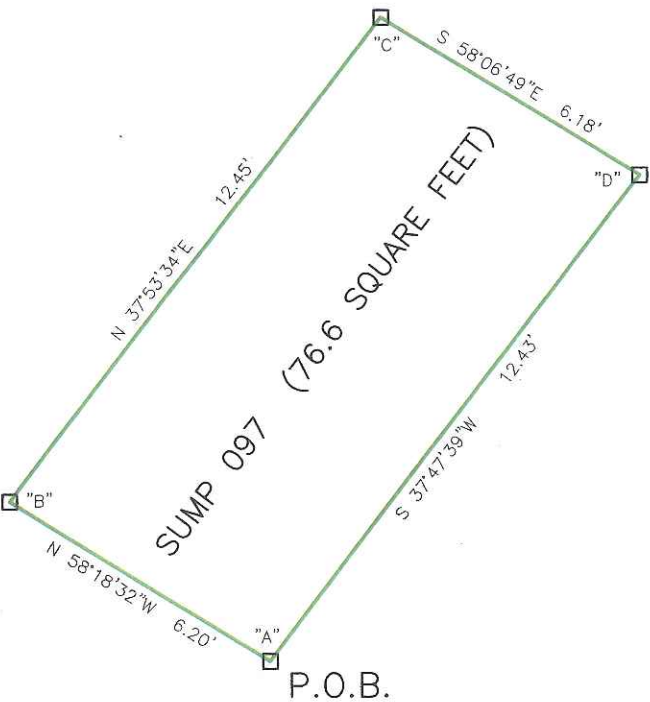
ALL BEARINGS, DISTANCES (UNLESS LABELED OTHERWISE), & COORDINATES ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, NORTH CENTRAL ZONE, CODE 4202, NAD 1983 (92). THE SCALE FACTOR APPLIED EQUALS 0.9998954238 & IS BASED ON SURFACE TRAVERSE BETWEEN STATIONS TYLER-1 & TYLER-2. THE COMPUTED LAND AREA IS BASED ON SURFACE DISTANCES.

NOTES:

- ✕ INDICATES TYPE "G" CORPS OF ENGINEERS MONUMENT (FOUND)
- INDICATES CORNER OF EXTERNAL FACE OF CONCRETE
- INDICATES UNMARKED POINT

I, Tom A. Fidler, registered professional land surveyor, No. 3940, do hereby certify that this plat reflects the location of the corners on the tract herein described, as surveyed on the ground and under my supervision in February & March 2011.

Witness my hand and seal March 4, 2011.



N 33°53'28"E 842.86'

STATION TYLER-1  
STATE OF TEXAS  
NORTH CENTRAL ZONE  
N=6958507.460 FEET  
E=3314279.499 FEET



SCALE 1"=3'



FIELD NOTES DESCRIPTION  
IS ON SEPARATE SHEET

Tom A. Fidler, Registered Professional Land Surveyor, No. 3940



BEARING SOURCE  
S 52°46'07.6"E 1116.102'  
(SURFACE TRAVERSE USING  
ELECTRONIC TOTAL STATION  
INDICATES 1116.219')

STATION TYLER-2  
STATE OF TEXAS  
NORTH CENTRAL ZONE  
N=6957832.181 FEET  
E=3315168.140 FEET

SUMP 097  
(76.6 SQUARE FEET)  
LONGHORN ARMY AMMUNITION PLANT  
HARRISON COUNTY, TEXAS

JOB #0407088	0407088.CRD	Z.PTS	Z.LEG
MAR. 4, 2011	0908074Z.DWG		DRAWN BY JTJ

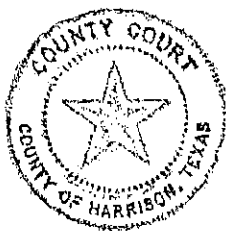
2012-000000710

\*\*\*DO NOT REMOVE THIS PAGE – IT IS A PART OF THIS INSTRUMENT\*\*\*

## MISCELLANEOUS

6 Pages

FILED AND RECORDED – OPR	CLERKS NOTES
<b>On:</b> <u>01/19/2012 10:41 AM</u>	
<b>Document Number:</b> <u>2012-000000710</u>	
<b>Receipt No:</b> <u>1200645</u>	
<b>Amount:</b> \$ <u>32.00</u>	
<b>By:</b> <u>Ann Turner</u> , Deputy	
<b>Patsy Cox, County Clerk Harrison County, Texas</b>	

STATE OF TEXAS  
COUNTY OF HARRISON

I hereby certify that this instrument was filed on the date and time stamped hereon by me  
and was duly recorded in the Official Public Records of Harrison County, Texas.

Patsy Cox, Harrison County Clerk

---

**Record and Return To:**

SHAW ENVIRONMENTAL & INFRASTRUCTURE GROUP  
1401 ENCLAVE PARKWAY, SUITE 250

HOUSTON, TX 77077

STATE OF TEXAS

HARRISON COUNTY

INDUSTRIAL SOLID WASTE  
NOTICE OF NONRESIDENTIAL LAND USE

KNOW ALL MEN BY THESE PRESENTS THAT:

Pursuant to the Rules of the Texas Commission on Environmental Quality (TCEQ) pertaining to Industrial Solid Waste Management, this document is hereby filed in the Public Records of Harrison County, Texas in compliance with the recordation requirements of said rules:

I

The U.S. Army, Department of Defense, has performed a remediation of the land described herein. Sump098 (called Sump 098 on the attached Exhibit A) is part of LHAAP-35/36. Sump098 is a former sump location near Building 38-Y physically located within site boundary of LHAAP-48 of the former Longhorn Army Ammunition Plant (LHAAP). LHAAP was placed on the National Priorities List (NPL) during August 1990. After its listing on the NPL, the U.S. Army, United States Environmental Protection Agency (USEPA), and TCEQ (formerly known as Texas Water Commission) entered into an agreement under the Comprehensive Environmental Response Compensation, and Liability Act (CERCLA) Section 120 for remedial activities. The CERCLA Section 120 Agreement, referred to as the Federal Facility Agreement (FFA), became effective on December 30, 1991. Although there are many sites at LHAAP that are specifically NPL listed, LHAAP-35/36, of which Sump098 is a part, is not considered an NPL site. Environmental activities at LHAAP-35/36 progressed through the site investigation, at which point it was agreed by the Army and the TCEQ, the lead regulatory agency, no significant releases had occurred and the site could be closed under Texas Administrative Code (TAC) Risk Reduction Rule Standard 2.

LHAAP-35/36 is a collection of 125 process sumps and 20 waste rack sumps found in multiple locations across the installation and predominantly associated with process areas. All of the production buildings had sumps that collected wash down water. Sumps (including Sump098) were also associated with wash racks (waste rack sumps) where containers were cleaned and stored. Further information may be found in the Notice of Registration No. 30990 files, which are available for inspection upon request at

TCEQ, Central File Room Customer Service Center, Building E, 12100 Park 35 Circle, Austin, Texas, 78753, (512) 239-2900, Monday through Friday 8:00 a.m. to 5:00 p.m. or in the Administrative Record available at the Marshall Public Library, 300 S. Alamo Blvd, Marshall, Texas 75670, (903) 935-4465, Monday through Thursday 10:00 a.m. to 8 p.m., Friday and Saturday 10:00 a.m. to 5:30 p.m.

The TCEQ requires certain persons to provide recordation in the real property records to notify the public of the conditions of the land and/or the occurrence of remediation. This notification is not a representation or warranty by the TCEQ of the suitability of this land for any purpose.

## II

The Sump098 parcel is 39.4 square feet, more or less, or 0.0009 acre tract located in Harrison County, Texas, near the town of Karnack, being more particularly described with survey plat and metes and bounds established in Exhibit A.

The United States Department of the Army has undertaken careful environmental study of the Sump098 site and USEPA and TCEQ concluded that no further investigation or action is required. Contaminants in soil samples from Sump098 meet non-residential soil criteria in accordance with 30TAC§335.560(b).

Limited monitoring of Sump098 will take place in the form of Letters of Certification from the Army or the Transferee to TCEQ every five years to document that the use of Sump098 is consistent with the non-residential use scenarios evaluated in the risk assessment. Future use of the parcel is intended as a national wildlife refuge consistent with industrial or recreational activities and not for residential purposes. For purposes of this certification, residential use includes, but is not limited to, single family or multi-family residences; child care facilities; nursing home or assisted living facilities; and any type of educational purpose for children/young adults in grades kindergarten through 12.


## III

The owner of the site is the Department of the Army, and its address where more specific information may be obtained is as follows:

ATTN: DAIM-ODB-LO (R. Zeiler)  
Post Office Box 220  
Ratcliff, AR 72951

or

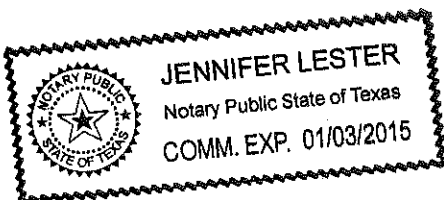
Assistant Chief of Staff for Installation Management  
ATTN: DAIM-ODB (T. Lederle)  
600 Army Pentagon  
Washington D.C. 20310-0600

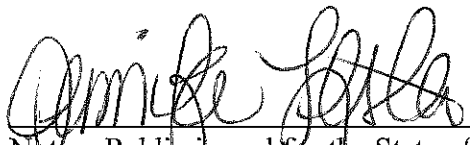
  
\_\_\_\_\_  
Rose M. Zeiler  
Longhorn AAP Site Manager

EXECUTED this the 30th day of June, 2011.

BEFORE ME, on this the 30th day of June, personally appeared Rose M. Zeiler, of the United States Army, United States Department of Defense, known to me to be the person and agent of said agency whose name is subscribed to the foregoing instrument, and she acknowledged to me that she executed the same for the purposes and in the capacity therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 30 day of June, 2011.



  
\_\_\_\_\_  
Notary Public in and for the State of Texas,  
County of Harrison

FIELD NOTES DESCRIPTION OF  
SUMP 098  
LONGHORN ARMY AMMUNITION PLANT  
HARRISON COUNTY, TEXAS

The herein described tract of land is located in Harrison County, Texas, near the town of Karnack, being 39.4 square feet of land out of the Longhorn Ordnance Works Reservation (also known as the Longhorn Army Ammunition Plant, Karnack, Texas), said tract being more particularly described as follows :

Surveyor's Note : All bearings and distances herein (unless labeled surface distance) are based on the Texas State Plane Coordinate System, North Central Zone, Code 4202, NAD 1983 (92). The scale factor applied equals 0.9998954238, and is based on surface traverse using electronic total station between type "G" Corps of Engineers monuments "TYLER-1" (N=6958507.460 feet E=3314279.499 feet) and "TYLER-2" (N=6957832.181 feet E=3315168.140 feet). Said traverse indicates a surface distance of 1116.219 feet between said monuments. The computed land area is based on surface distances.

Commencing at monument "TYLER-1" referenced above,

THENCE N 28deg58'18"E 815.98' to this POINT OF BEGINNING, said point being at the Southmost corner of the external face of the concrete which defines this sump,

THENCE along the external face of the concrete which defines this sump the following four courses, each course ending at a corner of the external face of said concrete :

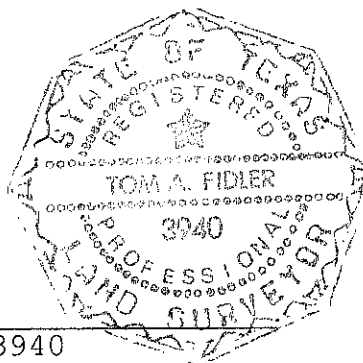
- (01) N 51deg59'37"W 9.74', being this sump's Westmost corner,
- (02) N 43deg01'55"E 4.05', being this sump's Northmost corner,
- (03) S 52deg06'01"E 9.75', being this sump's Eastmost corner,
- (04) S 43deg15'56"W 4.07', being the aforementioned POINT OF BEGINNING.

This tract contains 39.4 square feet, more or less.

I, Tom A. Fidler, registered professional land surveyor No. 3940 in the State of Texas, do hereby certify that this field notes description is the result of a survey made on the ground and under my supervision.



Tom A. Fidler, R.P.L.S. Number 3940





**LANDMARK CONSULTANTS, INC.**

PROFESSIONAL LAND SURVEYORS

P.O. BOX 606 LONGVIEW, TEXAS 75606  
 PHONE (903) 236-3377 FAX (903) 236-3530  
 E-MAIL landmark@cablelynx.com

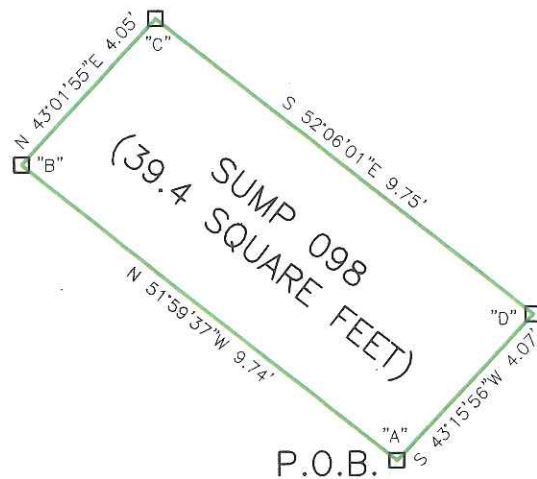
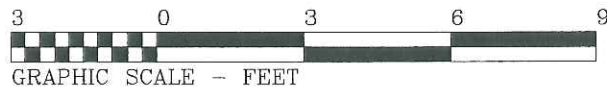
**NOTES:**

- X INDICATES TYPE "G" CORPS OF ENGINEERS MONUMENT (FOUND)
- INDICATES CORNER OF EXTERNAL FACE OF CONCRETE
- INDICATES UNMARKED POINT

**NOTE**

ALL BEARINGS, DISTANCES (UNLESS LABELED OTHERWISE), & COORDINATES ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, NORTH CENTRAL ZONE, CODE 4202, NAD 1983 (92). THE SCALE FACTOR APPLIED EQUALS 0.9998954238 & IS BASED ON SURFACE TRAVERSE BETWEEN STATIONS TYLER-1 & TYLER-2. THE COMPUTED LAND AREA IS BASED ON SURFACE DISTANCES.

SCALE 1"=3'

**COORDINATE TABLE**

POINT	NORTH	EAST
A	6959221.331	3314674.744
B	6959227.327	3314667.072
C	6959230.288	3314669.837
D	6959224.296	3314677.534

I, Tom A. Fidler, registered professional land surveyor, No. 3940, do hereby certify that this plat reflects the location of the corners on the tract herein described, as surveyed on the ground and under my supervision in February & March 2011.

Witness my hand and seal March 4, 2011.

STATION TYLER-1  
 STATE OF TEXAS  
 NORTH CENTRAL ZONE  
 N=6958507.460 FEET  
 E=3314279.499 FEET

BEARING SOURCE  
 S 52°46'07.6\"E 1116.102'  
 (SURFACE TRAVERSE USING  
 ELECTRONIC TOTAL STATION  
 INDICATES 1116.219')

STATION TYLER-2  
 STATE OF TEXAS  
 NORTH CENTRAL ZONE  
 N=6957832.181 FEET  
 E=3315168.140 FEET

FIELD NOTES DESCRIPTION  
 IS ON SEPARATE SHEET

**SUMP 098**  
**(39.4 SQUARE FEET)**  
**LONGHORN ARMY AMMUNITION PLANT**  
**HARRISON COUNTY, TEXAS**

JOB #0407088	0407088.CRD	Y.PTS	Y.LEG
MAR. 4, 2011	0908074Y.DWG	DRAWN BY	JTJ

Tom A. Fidler, Registered Professional Land Surveyor, No. 3940



2012-000000711

\*\*\*DO NOT REMOVE THIS PAGE – IT IS A PART OF THIS INSTRUMENT\*\*\*

## MISCELLANEOUS

6 Pages

FILED AND RECORDED – OPR	CLERKS NOTES
On: <u>01/19/2012 10:41 AM</u>	
Document Number: <u>2012-000000711</u>	
Receipt No: <u>1200645</u>	
Amount: \$ <u>32.00</u>	
By: <u>Ann Turner</u> , Deputy	
<b>Patsy Cox, County Clerk Harrison County, Texas</b>	

STATE OF TEXAS  
COUNTY OF HARRISONI hereby certify that this instrument was filed on the date and time stamped hereon by me  
and was duly recorded in the Official Public Records of Harrison County, Texas.

Patsy Cox, Harrison County Clerk

Record and Return To:

SHAW ENVIRONMENTAL & INFRASTRUCTION GROUP  
1401 ENCLAVE PARKWAY, SUITE 250

HOUSTON, TX 77077

STATE OF TEXAS

HARRISON COUNTY

INDUSTRIAL SOLID WASTE  
NOTICE OF NONRESIDENTIAL LAND USE

KNOW ALL MEN BY THESE PRESENTS THAT:

Pursuant to the Rules of the Texas Commission on Environmental Quality (TCEQ) pertaining to Industrial Solid Waste Management, this document is hereby filed in the Public Records of Harrison County, Texas in compliance with the recordation requirements of said rules:

I

The U.S. Army, Department of Defense, has performed a remediation of the land described herein. Sump099 (called Sump 099 on the attached Exhibit A) is part of LHAAP-35/36. Sump099 is a former sump location near Building 38-Y physically located within site boundary of LHAAP-48 of the former Longhorn Army Ammunition Plant (LHAAP). LHAAP was placed on the National Priorities List (NPL) during August 1990. After its listing on the NPL, the U.S. Army, United States Environmental Protection Agency (USEPA), and TCEQ (formerly known as Texas Water Commission) entered into an agreement under the Comprehensive Environmental Response Compensation, and Liability Act (CERCLA) Section 120 for remedial activities. The CERCLA Section 120 Agreement, referred to as the Federal Facility Agreement (FFA), became effective on December 30, 1991. Although there are many sites at LHAAP that are specifically NPL listed, LHAAP-35/36, of which Sump099 is a part, is not considered an NPL site. Environmental activities at LHAAP-35/36 progressed through the site investigation, at which point it was agreed by the Army and the TCEQ, the lead regulatory agency, no significant releases had occurred and the site could be closed under Texas Administrative Code (TAC) Risk Reduction Rule Standard 2.

LHAAP-35/36 is a collection of 125 process sumps and 20 waste rack sumps found in multiple locations across the installation and predominantly associated with process areas. All of the production buildings had sumps that collected wash down water. Sumps (including Sump099) were also associated with wash racks (waste rack sumps) where containers were cleaned and stored. Further information may be found in the Notice of Registration No. 30990 files, which are available for inspection upon request at

TCEQ, Central File Room Customer Service Center, Building E, 12100 Park 35 Circle, Austin, Texas, 78753, (512) 239-2900, Monday through Friday 8:00 a.m. to 5:00 p.m. or in the Administrative Record available at the Marshall Public Library, 300 S. Alamo Blvd, Marshall, Texas 75670, (903) 935-4465, Monday through Thursday 10:00 a.m. to 8 p.m., Friday and Saturday 10:00 a.m. to 5:30 p.m.

The TCEQ requires certain persons to provide recordation in the real property records to notify the public of the conditions of the land and/or the occurrence of remediation. This notification is not a representation or warranty by the TCEQ of the suitability of this land for any purpose.

## II

The Sump099 parcel is 48 square feet, more or less, or 0.0011 acre tract located in Harrison County, Texas, near the town of Karnack, being more particularly described with survey plat and metes and bounds established in Exhibit A.

The United States Department of the Army has undertaken careful environmental study of the Sump099 site and USEPA and TCEQ concluded that no further investigation or action is required. Contaminants in soil samples from Sump099 meet non-residential soil criteria in accordance with 30TAC§335.560(b).

Limited monitoring of Sump099 will take place in the form of Letters of Certification from the Army or the Transferee to TCEQ every five years to document that the use of Sump099 is consistent with the non-residential use scenarios evaluated in the risk assessment. Future use of the parcel is intended as a national wildlife refuge consistent with industrial or recreational activities and not for residential purposes. For purposes of this certification, residential use includes, but is not limited to, single family or multi-family residences; child care facilities; nursing home or assisted living facilities; and any type of educational purpose for children/young adults in grades kindergarten through 12.

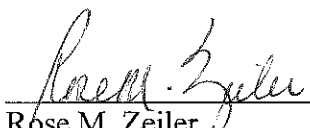
## III

The owner of the site is the Department of the Army, and its address where more specific information may be obtained is as follows:

ATTN: DAIM-ODB-LO (R. Zeiler)  
Post Office Box 220  
Ratcliff, AR 72951

or

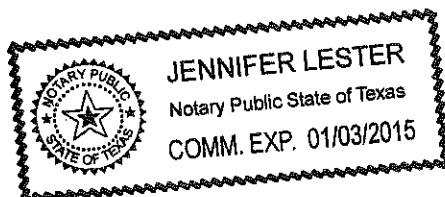
Assistant Chief of Staff for Installation Management  
ATTN: DAIM-ODB (T. Lederle)  
600 Army Pentagon  
Washington D.C. 20310-0600

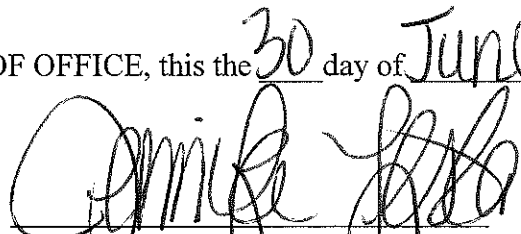
  
\_\_\_\_\_  
Rose M. Zeiler  
Longhorn AAP Site Manager

EXECUTED this the 30th day of June, 2011.

BEFORE ME, on this the 30th day of June, personally appeared Rose M. Zeiler, of the United States Army, United States Department of Defense, known to me to be the person and agent of said agency whose name is subscribed to the foregoing instrument, and she acknowledged to me that she executed the same for the purposes and in the capacity therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 30 day of June, 2011.



  
\_\_\_\_\_  
Notary Public in and for the State of Texas,  
County of Harrison

FIELD NOTES DESCRIPTION OF  
SUMP 099  
LONGHORN ARMY AMMUNITION PLANT  
HARRISON COUNTY, TEXAS

The herein described tract of land is located in Harrison County, Texas, near the town of Karnack, being 48.0 square feet of land out of the Longhorn Ordnance Works Reservation (also known as the Longhorn Army Ammunition Plant, Karnack, Texas), said tract being more particularly described as follows :

Surveyor's Note : All bearings and distances herein (unless labeled surface distance) are based on the Texas State Plane Coordinate System, North Central Zone, Code 4202, NAD 1983 (92). The scale factor applied equals 0.9998954238, and is based on surface traverse using electronic total station between type "G" Corps of Engineers monuments "TYLER-1" (N=6958507.460 feet E=3314279.499 feet) and "TYLER-2" (N=6957832.181 feet E=3315168.140 feet). Said traverse indicates a surface distance of 1116.219 feet between said monuments. The computed land area is based on surface distances.

Commencing at monument "TYLER-1" referenced above,

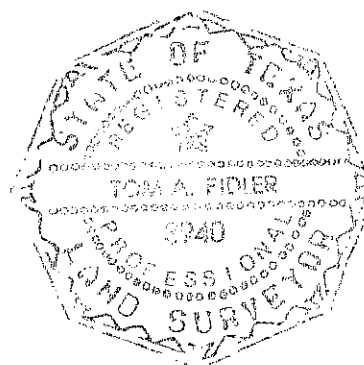
THENCE N 27deg36'35"E 879.49' to a point for the Southmost corner of this sump and this POINT OF BEGINNING,

THENCE along the boundary of this tract the following four courses :

- (01) N 37deg59'57"W 8.00' to a point for the Westmost corner of this tract,
- (02) N 52deg00'03"E 6.00' to a point for the Northmost corner of this tract,
- (03) S 37deg59'57"E 8.00' to a point for the Eastmost corner of this tract,
- (04) S 52deg00'03"W 6.00' to this POINT OF BEGINNING.

This tract contains 48.0 square feet, more or less.

I, Tom A. Fidler, registered professional land surveyor No. 3940 in the State of Texas, do hereby certify that this field notes description is the result of a survey made on the ground and under my supervision.



Tom A. Fidler, R.P.L.S. Number 3940

NOTE

ALL BEARINGS, DISTANCES (UNLESS LABELED OTHERWISE), & COORDINATES ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, NORTH CENTRAL ZONE, CODE 4202, NAD 1983 (92). THE SCALE FACTOR APPLIED EQUALS 0.9998954238 & IS BASED ON SURFACE TRAVERSE BETWEEN STATIONS TYLER-1 & TYLER-2. THE COMPUTED LAND AREA IS BASED ON SURFACE DISTANCES.

COORDINATE TABLE

POINT	NORTH	EAST
A	6959286.801	3314687.099
B	6959293.105	3314682.173
C	6959296.799	3314686.901
D	6959290.495	3314691.827

I, Tom A. Fidler, registered professional land surveyor, No. 3940, do hereby certify that this plat reflects the location of the corners on the tract herein described, as surveyed on the ground and under my supervision in February & March 2011.

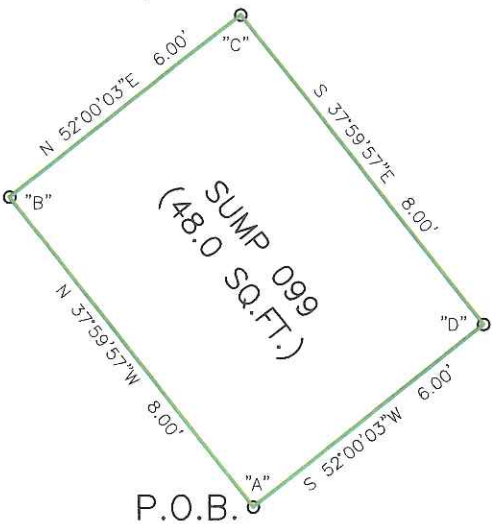
Witness my hand and seal March 14, 2011.

  
Tom A. Fidler, Registered Professional Land Surveyor, No. 3940



NOTES

- X INDICATES TYPE "G" CORPS OF ENGINEERS MONUMENT (FOUND)
- O INDICATES UNMARKED CORNER OF SUMP



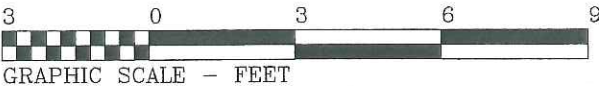
STATION TYLER-1  
STATE OF TEXAS  
NORTH CENTRAL ZONE  
N=6958507.460 FEET  
E=3314279.499 FEET

BEARING SOURCE  
S 52°46'07.6"E 1116.102'  
(SURFACE TRAVERSE USING  
ELECTRONIC TOTAL STATION  
INDICATES 1116.219')

STATION TYLER-2  
STATE OF TEXAS  
NORTH CENTRAL ZONE  
N=6957832.181 FEET  
E=3315168.140 FEET



SCALE 1"=3'



FIELD NOTES DESCRIPTION  
IS ON SEPARATE SHEET

SUMP 099  
(48.0 SQUARE FEET)  
LONGHORN ARMY AMMUNITION PLANT  
HARRISON COUNTY, TEXAS

JOB #0407088	0407088.CRD	J.PTS	J.LEG
03/14/2011	1103025J.DWG	DRAWN BY JTJ	

2012-000000712

\*\*\*DO NOT REMOVE THIS PAGE – IT IS A PART OF THIS INSTRUMENT\*\*\*

## MISCELLANEOUS

6 Pages

FILED AND RECORDED – OPR	CLERKS NOTES
<b>On:</b> <u>01/19/2012 10:41 AM</u>	
<b>Document Number:</b> <u>2012-000000712</u>	
<b>Receipt No:</b> <u>1200645</u>	
<b>Amount:</b> \$ <u>32.00</u>	
<b>By:</b> <u>Ann Turner</u> , Deputy	
<b>Patsy Cox, County Clerk Harrison County, Texas</b>	

STATE OF TEXAS  
COUNTY OF HARRISON

I hereby certify that this instrument was filed on the date and time stamped hereon by me  
and was duly recorded in the Official Public Records of Harrison County, Texas.

Patsy Cox, Harrison County Clerk

---

**Record and Return To:**

SHAW ENVIRONMENTAL & INFRASTRUCTION GROUP  
1401 ENCLAVE PARKWAY, SUITE 250

HOUSTON, TX 77077



STATE OF TEXAS

HARRISON COUNTY

INDUSTRIAL SOLID WASTE  
NOTICE OF NONRESIDENTIAL LAND USE

KNOW ALL MEN BY THESE PRESENTS THAT:

Pursuant to the Rules of the Texas Commission on Environmental Quality (TCEQ) pertaining to Industrial Solid Waste Management, this document is hereby filed in the Public Records of Harrison County, Texas in compliance with the recordation requirements of said rules:

I

The U.S. Army, Department of Defense, has performed a remediation of the land described herein. Sump100 (called Sump 100 on the attached Exhibit A) is part of LHAAP-35/36. Sump100 is a former sump location near Building 45-Y physically located within site boundary of LHAAP-48 of the former Longhorn Army Ammunition Plant (LHAAP). LHAAP was placed on the National Priorities List (NPL) during August 1990. After its listing on the NPL, the U.S. Army, United States Environmental Protection Agency (USEPA), and TCEQ (formerly known as Texas Water Commission) entered into an agreement under the Comprehensive Environmental Response Compensation, and Liability Act (CERCLA) Section 120 for remedial activities. The CERCLA Section 120 Agreement, referred to as the Federal Facility Agreement (FFA), became effective on December 30, 1991. Although there are many sites at LHAAP that are specifically NPL listed, LHAAP-35/36, of which Sump100 is a part, is not considered an NPL site. Environmental activities at LHAAP-35/36 progressed through the site investigation, at which point it was agreed by the Army and the TCEQ, the lead regulatory agency, no significant releases had occurred and the site could be closed under Texas Administrative Code (TAC) Risk Reduction Rule Standard 2.

LHAAP-35/36 is a collection of 125 process sumps and 20 waste rack sumps found in multiple locations across the installation and predominantly associated with process areas. All of the production buildings had sumps that collected wash down water. Sumps (including Sump100) were also associated with wash racks (waste rack sumps) where containers were cleaned and stored. Further information may be found in the Notice of Registration No. 30990 files, which are available for inspection upon request at

TCEQ, Central File Room Customer Service Center, Building E, 12100 Park 35 Circle, Austin, Texas, 78753, (512) 239-2900, Monday through Friday 8:00 a.m. to 5:00 p.m. or in the Administrative Record available at the Marshall Public Library, 300 S. Alamo Blvd, Marshall, Texas 75670, (903) 935-4465, Monday through Thursday 10:00 a.m. to 8 p.m., Friday and Saturday 10:00 a.m. to 5:30 p.m.

The TCEQ requires certain persons to provide recordation in the real property records to notify the public of the conditions of the land and/or the occurrence of remediation. This notification is not a representation or warranty by the TCEQ of the suitability of this land for any purpose.

## II

The Sump100 parcel is 80 square feet, more or less, or 0.00183 acre tract located in Harrison County, Texas, near the town of Karnack, being more particularly described with survey plat and metes and bounds established in Exhibit A.

The United States Department of the Army has undertaken careful environmental study of the Sump100 site and USEPA and TCEQ concluded that no further investigation or action is required. Contaminants in soil samples from Sump100 meet non-residential soil criteria in accordance with 30TAC§335.560(b).

Limited monitoring of Sump100 will take place in the form of Letters of Certification from the Army or the Transferee to TCEQ every five years to document that the use of Sump100 is consistent with the non-residential use scenarios evaluated in the risk assessment. Future use of the parcel is intended as a national wildlife refuge consistent with industrial or recreational activities and not for residential purposes. For purposes of this certification, residential use includes, but is not limited to, single family or multi-family residences; child care facilities; nursing home or assisted living facilities; and any type of educational purpose for children/young adults in grades kindergarten through 12.


## III

The owner of the site is the Department of the Army, and its address where more specific information may be obtained is as follows:

ATTN: DAIM-ODB-LO (R. Zeiler)  
Post Office Box 220  
Ratcliff, AR 72951

or

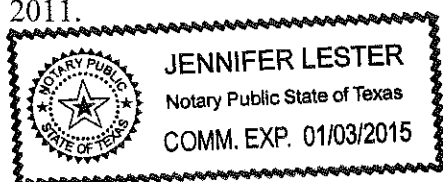
Assistant Chief of Staff for Installation Management  
ATTN: DAIM-ODB (T. Lederle)  
600 Army Pentagon  
Washington D.C. 20310-0600

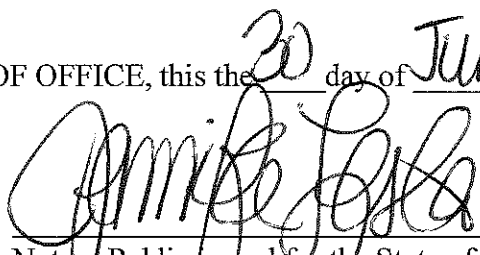
  
\_\_\_\_\_  
Rose M. Zeiler  
Longhorn AAP Site Manager

EXECUTED this the 30th day of June, 2011.

BEFORE ME, on this the 30th day of June, personally appeared Rose M. Zeiler, of the United States Army, United States Department of Defense, known to me to be the person and agent of said agency whose name is subscribed to the foregoing instrument, and she acknowledged to me that she executed the same for the purposes and in the capacity therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 30 day of June, 2011.



  
\_\_\_\_\_  
Notary Public in and for the State of Texas,  
County of Harrison

FIELD NOTES DESCRIPTION OF  
SUMP 100  
LONGHORN ARMY AMMUNITION PLANT  
HARRISON COUNTY, TEXAS

The herein described tract of land is located in Harrison County, Texas, near the town of Karnack, being 80.0 square feet of land out of the Longhorn Ordnance Works Reservation (also known as the Longhorn Army Ammunition Plant, Karnack, Texas), said tract being more particularly described as follows :

Surveyor's Note : All bearings and distances herein (unless labeled surface distance) are based on the Texas State Plane Coordinate System, North Central Zone, Code 4202, NAD 1983 (92). The scale factor applied equals 0.9998954238, and is based on surface traverse using electronic total station between type "G" Corps of Engineers monuments "TYLER-1" (N=6958507.460 feet E=3314279.499 feet) and "TYLER-2" (N=6957832.181 feet E=3315168.140 feet). Said traverse indicates a surface distance of 1116.219 feet between said monuments. The computed land area is based on surface distances.

Commencing at monument "TYLER-1" referenced above,

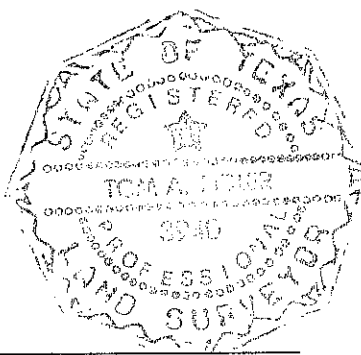
THENCE N 23deg52'16"E 995.90' to a point for the Southmost corner of this sump and this POINT OF BEGINNING,

THENCE along the boundary of this tract the following four courses :

- (01) N 37deg59'57"W 8.00' to a point for the Westmost corner of this tract,
- (02) N 52deg00'03"E 10.00' to a point for the Northmost corner of this tract,
- (03) S 37deg59'57"E 8.00' to a point for the Eastmost corner of this tract,
- (04) S 52deg00'03"W 10.00' to this POINT OF BEGINNING.

This tract contains 80.0 square feet, more or less.

I, Tom A. Fidler, registered professional land surveyor No. 3940 in the State of Texas, do hereby certify that this field notes description is the result of a survey made on the ground and under my supervision.

Tom A. Fidler, R.P.L.S. Number 3940

# NOTE

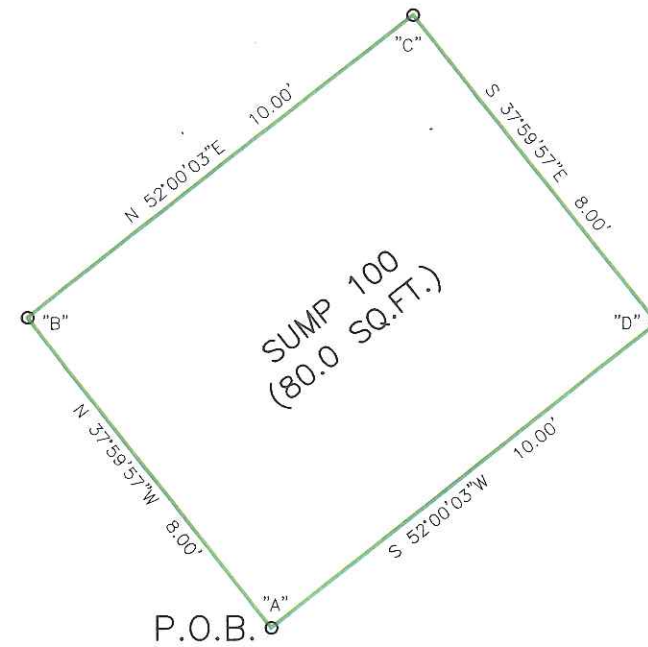
ALL BEARINGS, DISTANCES (UNLESS LABELED OTHERWISE), & COORDINATES ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, NORTH CENTRAL ZONE, CODE 4202, NAD 1983 (92). THE SCALE FACTOR APPLIED EQUALS 0.9998954238 & IS BASED ON SURFACE TRAVERSE BETWEEN STATIONS TYLER-1 & TYLER-2. THE COMPUTED LAND AREA IS BASED ON SURFACE DISTANCES.

## COORDINATE TABLE

POINT	NORTH	EAST
A	6959418.170	3314682.523
B	6959424.474	3314677.597
C	6959430.630	3314685.477
D	6959424.326	3314690.403

I, Tom A. Fidler, registered professional land surveyor, No. 3940, do hereby certify that this plat reflects the location of the corners on the tract herein described, as surveyed on the ground and under my supervision in February & March 2011.

Witness my hand and seal March 14, 2011.

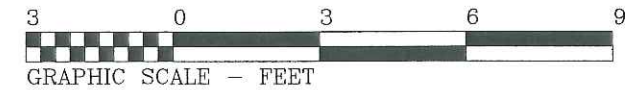


## NOTES

- X INDICATES TYPE "G" CORPS OF ENGINEERS MONUMENT (FOUND)
- O INDICATES UNMARKED CORNER OF SUMP



SCALE 1"=3'



STATION TYLER-1  
STATE OF TEXAS  
NORTH CENTRAL ZONE  
N=6958507.460 FEET  
E=3314279.499 FEET

FIELD NOTES DESCRIPTION  
IS ON SEPARATE SHEET

BEARING SOURCE  
S 52°46'07.6"E 1116.102'  
(SURFACE TRAVERSE USING  
ELECTRONIC TOTAL STATION  
INDICATES 1116.219')

STATION TYLER-2  
STATE OF TEXAS  
NORTH CENTRAL ZONE  
N=6957832.181 FEET  
E=3315168.140 FEET

SUMP 100  
(80.0 SQUARE FEET)  
LONGHORN ARMY AMMUNITION PLANT  
HARRISON COUNTY, TEXAS

JOB #0407088	0407088.CRD	K.PTS K.LEG
03/14/2011	1103025K.DWG	DRAWN BY JTJ



Tom A. Fidler, Registered Professional Land Surveyor, No. 3940

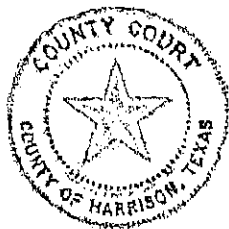
2012-000000713

\*\*\*DO NOT REMOVE THIS PAGE – IT IS A PART OF THIS INSTRUMENT\*\*\*

## MISCELLANEOUS

6 Pages

FILED AND RECORDED – OPR	CLERKS NOTES
On: <u>01/19/2012 10:41 AM</u>	
Document Number: <u>2012-000000713</u>	
Receipt No: <u>1200645</u>	
Amount: \$ <u>32.00</u>	
By: <u>Ann Turner</u> , Deputy	
<b>Patsy Cox, County Clerk Harrison County, Texas</b>	

STATE OF TEXAS  
COUNTY OF HARRISON

I hereby certify that this instrument was filed on the date and time stamped hereon by me  
and was duly recorded in the Official Public Records of Harrison County, Texas.

Patsy Cox, Harrison County Clerk

---

**Record and Return To:**

SHAW ENVIRONMENTAL & INFRASTRUCTION GROUP  
1401 ENCLAVE PARKWAY, SUITE 250

HOUSTON, TX 77077

STATE OF TEXAS

HARRISON COUNTY

INDUSTRIAL SOLID WASTE  
NOTICE OF NONRESIDENTIAL LAND USE

KNOW ALL MEN BY THESE PRESENTS THAT:

Pursuant to the Rules of the Texas Commission on Environmental Quality (TCEQ) pertaining to Industrial Solid Waste Management, this document is hereby filed in the Public Records of Harrison County, Texas in compliance with the recordation requirements of said rules:

I

The U.S. Army, Department of Defense, has performed a remediation of the land described herein. Sump101 (called Sump 101 on the attached Exhibit A) is part of LHAAP-35/36. Sump101 is a former sump location near Building 45-Y physically located within site boundary of LHAAP-48 of the former Longhorn Army Ammunition Plant (LHAAP). LHAAP was placed on the National Priorities List (NPL) during August 1990. After its listing on the NPL, the U.S. Army, United States Environmental Protection Agency (USEPA), and TCEQ (formerly known as Texas Water Commission) entered into an agreement under the Comprehensive Environmental Response Compensation, and Liability Act (CERCLA) Section 120 for remedial activities. The CERCLA Section 120 Agreement, referred to as the Federal Facility Agreement (FFA), became effective on December 30, 1991. Although there are many sites at LHAAP that are specifically NPL listed, LHAAP-35/36, of which Sump101 is a part, is not considered an NPL site. Environmental activities at LHAAP-35/36 progressed through the site investigation, at which point it was agreed by the Army and the TCEQ, the lead regulatory agency, no significant releases had occurred and the site could be closed under Texas Administrative Code (TAC) Risk Reduction Rule Standard 2.

LHAAP-35/36 is a collection of 125 process sumps and 20 waste rack sumps found in multiple locations across the installation and predominantly associated with process areas. All of the production buildings had sumps that collected wash down water. Sumps (including Sump101) were also associated with wash racks (waste rack sumps) where containers were cleaned and stored. Further information may be found in the Notice of Registration No. 30990 files, which are available for inspection upon request at

TCEQ, Central File Room Customer Service Center, Building E, 12100 Park 35 Circle, Austin, Texas, 78753, (512) 239-2900, Monday through Friday 8:00 a.m. to 5:00 p.m. or in the Administrative Record available at the Marshall Public Library, 300 S. Alamo Blvd, Marshall, Texas 75670, (903) 935-4465, Monday through Thursday 10:00 a.m. to 8 p.m., Friday and Saturday 10:00 a.m. to 5:30 p.m.

The TCEQ requires certain persons to provide recordation in the real property records to notify the public of the conditions of the land and/or the occurrence of remediation. This notification is not a representation or warranty by the TCEQ of the suitability of this land for any purpose.

## II

The Sump101 parcel is 67 square feet, more or less, or 0.00153 acre tract located in Harrison County, Texas, near the town of Karnack, being more particularly described with survey plat and metes and bounds established in Exhibit A.

The United States Department of the Army has undertaken careful environmental study of the Sump101 site and USEPA and TCEQ concluded that no further investigation or action is required. Contaminants in soil samples from Sump101 meet non-residential soil criteria in accordance with 30TAC§335.560(b).

Limited monitoring of Sump101 will take place in the form of Letters of Certification from the Army or the Transferee to TCEQ every five years to document that the use of Sump101 is consistent with the non-residential use scenarios evaluated in the risk assessment. Future use of the parcel is intended as a national wildlife refuge consistent with industrial or recreational activities and not for residential purposes. For purposes of this certification, residential use includes, but is not limited to, single family or multi-family residences; child care facilities; nursing home or assisted living facilities; and any type of educational purpose for children/young adults in grades kindergarten through 12.

## III

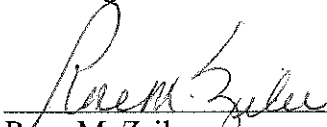
The owner of the site is the Department of the Army, and its address where more specific information may be obtained is as follows:

ATTN: DAIM-ODB-LO (R. Zeiler)  
Post Office Box 220  
Ratcliff, AR 72951

or



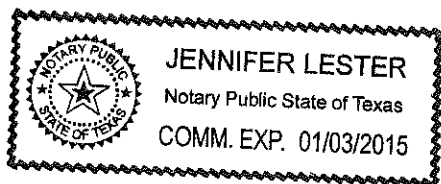
Assistant Chief of Staff for Installation Management  
ATTN: DAIM-ODB (T. Lederle)  
600 Army Pentagon  
Washington D.C. 20310-0600

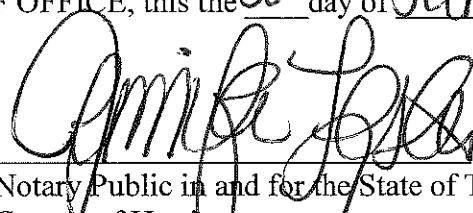
  
\_\_\_\_\_  
Rose M. Zeiler  
Longhorn AAP Site Manager

EXECUTED this the 30 th day of June, 2011.

BEFORE ME, on this the 30 th day of June, personally appeared Rose M. Zeiler, of the United States Army, United States Department of Defense, known to me to be the person and agent of said agency whose name is subscribed to the foregoing instrument, and she acknowledged to me that she executed the same for the purposes and in the capacity therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 30 day of June, 2011.



  
\_\_\_\_\_  
Notary Public in and for the State of Texas,  
County of Harrison

FIELD NOTES DESCRIPTION OF  
SUMP 101  
LONGHORN ARMY AMMUNITION PLANT  
HARRISON COUNTY, TEXAS

The herein described tract of land is located in Harrison County, Texas, near the town of Karnack, being 67.0 square feet of land out of the Longhorn Ordnance Works Reservation (also known as the Longhorn Army Ammunition Plant, Karnack, Texas), said tract being more particularly described as follows :

Surveyor's Note : All bearings and distances herein (unless labeled surface distance) are based on the Texas State Plane Coordinate System, North Central Zone, Code 4202, NAD 1983 (92). The scale factor applied equals 0.9998954238, and is based on surface traverse using electronic total station between type "G" Corps of Engineers monuments "TYLER-1" (N=6958507.460 feet E=3314279.499 feet) and "TYLER-2" (N=6957832.181 feet E=3315168.140 feet). Said traverse indicates a surface distance of 1116.219 feet between said monuments. The computed land area is based on surface distances.

Commencing at monument "TYLER-1" referenced above,

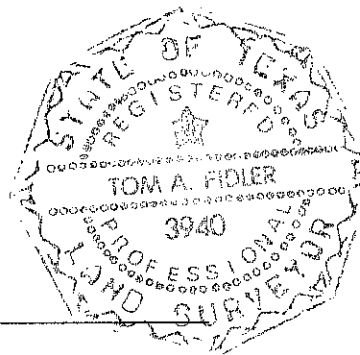
THENCE N 27deg18'47"E 1027.58' to this POINT OF BEGINNING, said point being at the Southmost corner of the external face of the concrete which defines this sump,

THENCE along the external face of the concrete which defines this sump the following four courses, each course ending at a corner of the external face of said concrete :

- (01) N 38deg59'52"W 11.24', being this sump's Westmost corner,
- (02) N 57deg48'20"E 5.99', being this sump's Northmost corner,
- (03) S 39deg05'42"E 11.26', being this sump's Eastmost corner,
- (04) S 57deg59'19"W 6.01', being the aforementioned POINT OF BEGINNING.

This tract contains 67.0 square feet, more or less.

I, Tom A. Fidler, registered professional land surveyor No. 3940 in the State of Texas, do hereby certify that this field notes description is the result of a survey made on the ground and under my supervision.



A handwritten signature of Tom A. Fidler, consisting of stylized cursive letters.

Tom A. Fidler, R.P.L.S. Number 3940

LANDMARK CONSULTANTS, INC.  
PROFESSIONAL LAND SURVEYORS  
P.O. BOX 606 LONGVIEW, TEXAS 75606  
PHONE (903) 236-3377 FAX (903) 236-3530  
E-MAIL landmark@cablelynx.com

NOTES:

- X INDICATES TYPE "G" CORPS OF ENGINEERS MONUMENT (FOUND)
- INDICATES CORNER OF EXTERNAL FACE OF CONCRETE
- INDICATES UNMARKED POINT

NOTE

ALL BEARINGS, DISTANCES (UNLESS LABELED OTHERWISE), & COORDINATES ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, NORTH CENTRAL ZONE, CODE 4202, NAD 1983 (92). THE SCALE FACTOR APPLIED EQUALS 0.9998954238 & IS BASED ON SURFACE TRAVERSE BETWEEN STATIONS TYLER-1 & TYLER-2. THE COMPUTED LAND AREA IS BASED ON SURFACE DISTANCES.

COORDINATE TABLE

POINT	NORTH	EAST
A	6959420.476	3314751.003
B	6959429.211	3314743.930
C	6959432.404	3314749.001
D	6959423.663	3314756.102

FIELD NOTES DESCRIPTION  
IS ON SEPARATE SHEETS

SUMP 101  
(67.0 SQUARE FEET)  
LONGHORN ARMY AMMUNITION PLANT  
HARRISON COUNTY, TEXAS

JOB #0407088	0407088.CRD	A.PTS A.LEG
MAR. 4, 2011	1103025A.DWG	DRAWN BY JTJ

SCALE 1"=3'



I, Tom A. Fidler, registered professional land surveyor, No. 3940, do hereby certify that this plat reflects the location of the corners on the tract herein described, as surveyed on the ground and under my supervision in February & March 2011.

Witness my hand and seal March 4, 2011.



Tom A. Fidler, Registered Professional Land Surveyor, No. 3940

N 27°18'47"E 1027.58'

STATION TYLER-1  
STATE OF TEXAS  
NORTH CENTRAL ZONE  
N=6958507.460 FEET  
E=3314279.499 FEET

BEARING SOURCE  
S 52°46'07.6"E 1116.102'  
(SURFACE TRAVERSE USING  
ELECTRONIC TOTAL STATION  
INDICATES 1116.219')

STATION TYLER-2  
STATE OF TEXAS  
NORTH CENTRAL ZONE  
N=6957832.181 FEET  
E=3315168.140 FEET

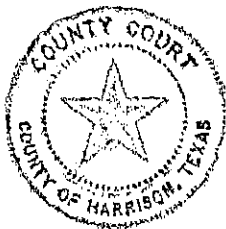
2012-000000714

\*\*\*DO NOT REMOVE THIS PAGE – IT IS A PART OF THIS INSTRUMENT\*\*\*

## MISCELLANEOUS

6 Pages

FILED AND RECORDED – OPR	CLERKS NOTES
<b>On:</b> <u>01/19/2012 10:41 AM</u>	
<b>Document Number:</b> <u>2012-000000714</u>	
<b>Receipt No:</b> <u>1200645</u>	
<b>Amount:</b> \$ <u>32.00</u>	
<b>By:</b> <u>Ann Turner</u> , Deputy	
<b>Patsy Cox, County Clerk Harrison County, Texas</b>	

STATE OF TEXAS  
COUNTY OF HARRISON

I hereby certify that this instrument was filed on the date and time stamped hereon by me  
and was duly recorded in the Official Public Records of Harrison County, Texas.

Patsy Cox, Harrison County Clerk

---

**Record and Return To:**

SHAW ENVIRONMENTAL & INFRASTRUCTION GROUP  
1401 ENCLAVE PARKWAY, SUITE 250

HOUSTON, TX 77077

STATE OF TEXAS

HARRISON COUNTY

INDUSTRIAL SOLID WASTE  
NOTICE OF NONRESIDENTIAL LAND USE

KNOW ALL MEN BY THESE PRESENTS THAT:

Pursuant to the Rules of the Texas Commission on Environmental Quality (TCEQ) pertaining to Industrial Solid Waste Management, this document is hereby filed in the Public Records of Harrison County, Texas in compliance with the recordation requirements of said rules:

I

The U.S. Army, Department of Defense, has performed a remediation of the land described herein. Sump102 (called Sump 102 on the attached Exhibit A) is part of LHAAP-35/36. Sump102 is a former sump location near Building 16-T physically located within site boundary of LHAAP-35C(53) of the former Longhorn Army Ammunition Plant (LHAAP). LHAAP was placed on the National Priorities List (NPL) during August 1990. After its listing on the NPL, the U.S. Army, United States Environmental Protection Agency (USEPA), and TCEQ (formerly known as Texas Water Commission) entered into an agreement under the Comprehensive Environmental Response Compensation, and Liability Act (CERCLA) Section 120 for remedial activities. The CERCLA Section 120 Agreement, referred to as the Federal Facility Agreement (FFA), became effective on December 30, 1991. Although there are many sites at LHAAP that are specifically NPL listed, LHAAP-35/36, of which Sump102 is a part, is not considered an NPL site. Environmental activities at LHAAP-35/36 progressed through the site investigation, at which point it was agreed by the Army and the TCEQ, the lead regulatory agency, no significant releases had occurred and the site could be closed under Texas Administrative Code (TAC) Risk Reduction Rule Standard 2.

LHAAP-35/36 is a collection of 125 process sumps and 20 waste rack sumps found in multiple locations across the installation and predominantly associated with process areas. All of the production buildings had sumps that collected wash down water. Sumps (including Sump102) were also associated with wash racks (waste rack sumps) where containers were cleaned and stored. Further information may be found in the

Notice of Registration No. 30990 files, which are available for inspection upon request at TCEQ, Central File Room Customer Service Center, Building E, 12100 Park 35 Circle, Austin, Texas, 78753, (512) 239-2900, Monday through Friday 8:00 a.m. to 5:00 p.m. or in the Administrative Record available at the Marshall Public Library, 300 S. Alamo Blvd, Marshall, Texas 75670, (903) 935-4465, Monday through Thursday 10:00 a.m. to 8 p.m., Friday and Saturday 10:00 a.m. to 5:30 p.m.

The TCEQ requires certain persons to provide recordation in the real property records to notify the public of the conditions of the land and/or the occurrence of remediation. This notification is not a representation or warranty by the TCEQ of the suitability of this land for any purpose.

## II

The Sump102 parcel is 154.4 square feet, more or less, or 0.00354 acre tract located in Harrison County, Texas, near the town of Karnack, being more particularly described with survey plat and metes and bounds established in Exhibit A.

The United States Department of the Army has undertaken careful environmental study of the Sump102 site and USEPA and TCEQ concluded that no further investigation or action is required. Contaminants in soil samples from Sump102 meet non-residential soil criteria in accordance with 30TAC§335.560(b).

Limited monitoring of Sump102 will take place in the form of Letters of Certification from the Army or the Transferee to TCEQ every five years to document that the use of Sump102 is consistent with the non-residential use scenarios evaluated in the risk assessment. Future use of the parcel is intended as a national wildlife refuge consistent with industrial or recreational activities and not for residential purposes. For purposes of this certification, residential use includes, but is not limited to, single family or multi-family residences; child care facilities; nursing home or assisted living facilities; and any type of educational purpose for children/young adults in grades kindergarten through 12.

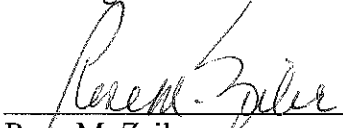
## III

The owner of the site is the Department of the Army, and its address where more specific information may be obtained is as follows:

ATTN: DAIM-ODB-LO (R. Zeiler)  
Post Office Box 220  
Ratcliff, AR 72951

or

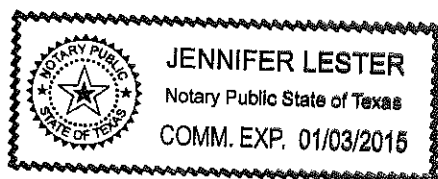
Assistant Chief of Staff for Installation Management  
ATTN: DAIM-ODB (T. Lederle)  
600 Army Pentagon  
Washington D.C. 20310-0600

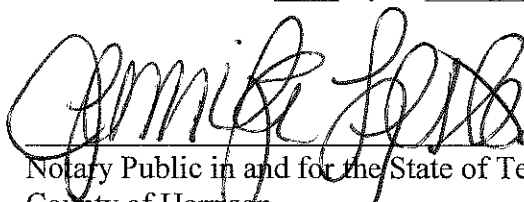
  
\_\_\_\_\_  
Rose M. Zeiler  
Longhorn AAP Site Manager

EXECUTED this the 30th day of June, 2011.

BEFORE ME, on this the 30th day of June, personally appeared Rose M. Zeiler, of the United States Army, United States Department of Defense, known to me to be the person and agent of said agency whose name is subscribed to the foregoing instrument, and she acknowledged to me that she executed the same for the purposes and in the capacity therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 30 day of June, 2011.



  
\_\_\_\_\_  
Notary Public in and for the State of Texas,  
County of Harrison

FIELD NOTES DESCRIPTION OF  
SUMP 102  
LONGHORN ARMY AMMUNITION PLANT  
HARRISON COUNTY, TEXAS

The herein described tract of land is located in Harrison County, Texas, near the town of Karnack, being 154.4 square feet of land out of the Longhorn Ordnance Works Reservation (also known as the Longhorn Army Ammunition Plant, Karnack, Texas), said tract being more particularly described as follows :

Surveyor's Note : All bearings and distances herein (unless labeled surface distance) are based on the Texas State Plane Coordinate System, North Central Zone, Code 4202, NAD 1983 (92). The scale factor applied equals 0.9998954238, and is based on surface traverse using electronic total station between type "G" Corps of Engineers monuments "TYLER-1" (N=6958507.460 feet E=3314279.499 feet) and "TYLER-2" (N=6957832.181 feet E=3315168.140 feet). Said traverse indicates a surface distance of 1116.219 feet between said monuments. The computed land area is based on surface distances.

Commencing at monument "TYLER-2" referenced above,

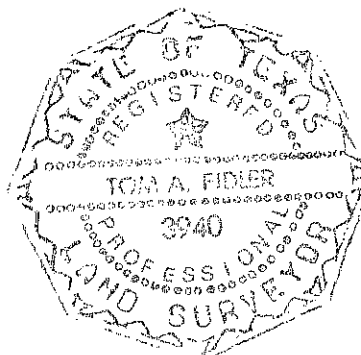
THENCE S 17deg29'41"E 550.28' to a point for the Northmost corner of this sump and this POINT OF BEGINNING,

THENCE along the boundary of this tract the following ten courses :

- (01) S 15deg52'38"E 7.67' to a point for the Eastmost corner of this tract,
- (02) S 74deg07'22"W 6.94' to a point for tract corner,
- (03) N 15deg52'38"W 5.54' to a point for tract corner,
- (04) S 74deg07'22"W 12.94' to a point for tract corner,
- (05) S 36deg37'46"W 24.51' to a point for tract corner,
- (06) S 53deg22'14"E 7.10' to a point for tract corner,
- (07) S 36deg37'46"W 2.10' to a point for the Southmost corner of this tract,
- (08) N 53deg22'14"W 9.25' to a point for the Westmost corner of this tract,
- (09) N 36deg37'46"E 27.31' to a point for tract corner,
- (10) N 74deg07'22"E 20.63' to this POINT OF BEGINNING.

This tract contains 154.4 square feet, more or less.

I, Tom A. Fidler, registered professional land surveyor No. 3940 in the State of Texas, do hereby certify that this field notes description is the result of a survey made on the ground and under my supervision.



A handwritten signature of Tom A. Fidler in black ink, written over a horizontal line.

Tom A. Fidler, R.P.L.S. Number 3940



NOTES:

- X INDICATES TYPE "G" CORPS OF ENGINEERS MONUMENT (FOUND)
- O INDICATES UNMARKED CORNER OF SUMP

STATION TYLER-1 X  
STATE OF TEXAS  
NORTH CENTRAL ZONE  
N=6958507.460 FEET  
E=3314279.499 FEET

BEARING SOURCE  
S 52°46'07.6"E 1116.102'  
(SURFACE TRAVERSE USING  
ELECTRONIC TOTAL STATION  
INDICATES 1116.219')

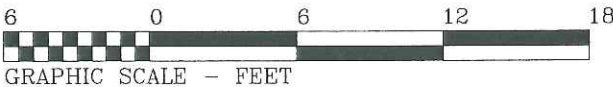
LANDMARK CONSULTANTS, INC.  
PROFESSIONAL LAND SURVEYORS  
P.O. BOX 606 LONGVIEW, TEXAS 75606  
PHONE (903) 236-3377 FAX (903) 236-3530  
E-MAIL landmark@cablelynx.com

STATION TYLER-2  
STATE OF TEXAS  
NORTH CENTRAL ZONE  
N=6957832.181 FEET  
E=3315168.140 FEET

NOTE

ALL BEARINGS, DISTANCES (UNLESS LABELED OTHERWISE), & COORDINATES ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, NORTH CENTRAL ZONE, CODE 4202, NAD 1983 (92). THE SCALE FACTOR APPLIED EQUALS 0.9998954238 & IS BASED ON SURFACE TRAVERSE BETWEEN STATIONS TYLER-1 & TYLER-2. THE COMPUTED LAND AREA IS BASED ON SURFACE DISTANCES.

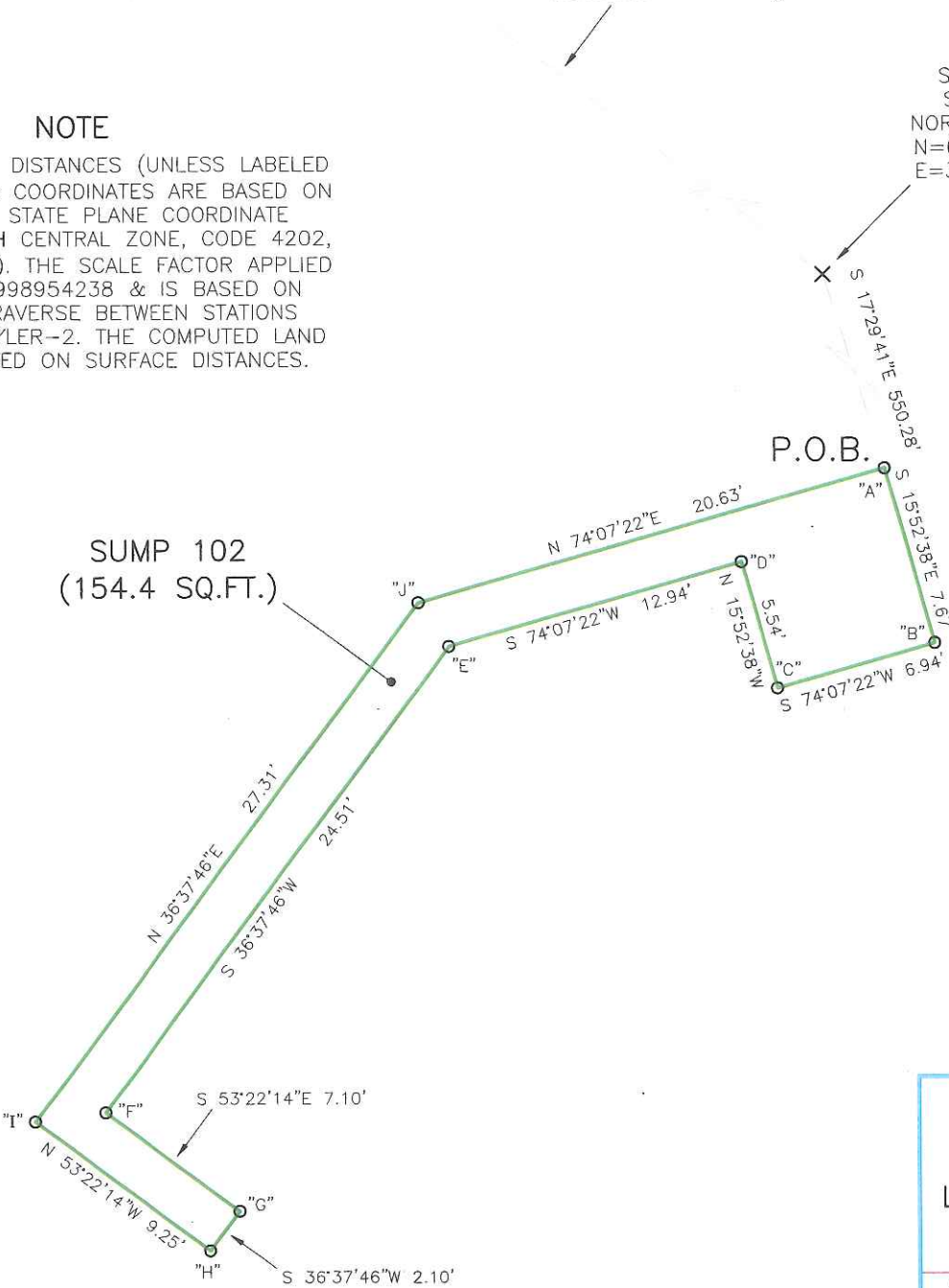
SCALE 1"=6'



I, Tom A. Fidler, registered professional land surveyor, No. 3940, do hereby certify that this plat reflects the location of the corners on the tract herein described, as surveyed on the ground and under my supervision in February & March 2011.

Witness my hand and seal March 11, 2011.

SUMP 102  
(154.4 SQ.FT.)



COORDINATE TABLE

POINT	NORTH	EAST
A	6957307.354	3315333.565
B	6957299.975	3315335.664
C	6957298.077	3315328.991
D	6957303.409	3315327.474
E	6957299.870	3315315.030
F	6957280.203	3315300.409
G	6957275.965	3315306.110
H	6957274.278	3315304.856
I	6957279.797	3315297.433
J	6957301.711	3315313.725

FIELD NOTES DESCRIPTION  
IS ON SEPARATE SHEET

SUMP 102  
(154.4 SQUARE FEET)  
LONGHORN ARMY AMMUNITION PLANT  
HARRISON COUNTY, TEXAS

JOB #1101007	0407088.CRD	B.PTS B.LEG
MAR. 11, 2011	1103025B.DWG	DRAWN BY JTJ

2012-000000715

\*\*\*DO NOT REMOVE THIS PAGE – IT IS A PART OF THIS INSTRUMENT\*\*\*

## MISCELLANEOUS

6 Pages

FILED AND RECORDED – OPR	CLERKS NOTES
<b>On:</b> <u>01/19/2012 10:41 AM</u>	
<b>Document Number:</b> <u>2012-000000715</u>	
<b>Receipt No:</b> <u>1200645</u>	
<b>Amount:</b> \$ <u>32.00</u>	
<b>By:</b> <u>Ann Turner</u> , Deputy	
<b>Patsy Cox, County Clerk Harrison County, Texas</b>	

STATE OF TEXAS  
COUNTY OF HARRISONI hereby certify that this instrument was filed on the date and time stamped hereon by me  
and was duly recorded in the Official Public Records of Harrison County, Texas.

Patsy Cox, Harrison County Clerk

Record and Return To:

SHAW ENVIRONMENTAL & INFRASTRUCTION GROUP  
1401 ENCLAVE PARKWAY, SUITE 250

HOUSTON, TX 77077

STATE OF TEXAS

HARRISON COUNTY

INDUSTRIAL SOLID WASTE  
NOTICE OF NONRESIDENTIAL LAND USE

KNOW ALL MEN BY THESE PRESENTS THAT:

Pursuant to the Rules of the Texas Commission on Environmental Quality (TCEQ) pertaining to Industrial Solid Waste Management, this document is hereby filed in the Public Records of Harrison County, Texas in compliance with the recordation requirements of said rules:

I

The U.S. Army, Department of Defense, has performed a remediation of the land described herein. Sump103 (called Sump 103 on the attached Exhibit A) is part of LHAAP-35/36. Sump103 is a former sump location near Building 16-T physically located within site boundary of LHAAP-35C(53) of the former Longhorn Army Ammunition Plant (LHAAP). LHAAP was placed on the National Priorities List (NPL) during August 1990. After its listing on the NPL, the U.S. Army, United States Environmental Protection Agency (USEPA), and TCEQ (formerly known as Texas Water Commission) entered into an agreement under the Comprehensive Environmental Response Compensation, and Liability Act (CERCLA) Section 120 for remedial activities. The CERCLA Section 120 Agreement, referred to as the Federal Facility Agreement (FFA), became effective on December 30, 1991. Although there are many sites at LHAAP that are specifically NPL listed, LHAAP-35/36, of which Sump103 is a part, is not considered an NPL site. Environmental activities at LHAAP-35/36 progressed through the site investigation, at which point it was agreed by the Army and the TCEQ, the lead regulatory agency, no significant releases had occurred and the site could be closed under Texas Administrative Code (TAC) Risk Reduction Rule Standard 2.

LHAAP-35/36 is a collection of 125 process sumps and 20 waste rack sumps found in multiple locations across the installation and predominantly associated with process areas. All of the production buildings had sumps that collected wash down water. Sumps (including Sump103) were also associated with wash racks (waste rack sumps) where containers were cleaned and stored. Further information may be found in the

Notice of Registration No. 30990 files, which are available for inspection upon request at TCEQ, Central File Room Customer Service Center, Building E, 12100 Park 35 Circle, Austin, Texas, 78753, (512) 239-2900, Monday through Friday 8:00 a.m. to 5:00 p.m. or in the Administrative Record available at the Marshall Public Library, 300 S. Alamo Blvd, Marshall, Texas 75670, (903) 935-4465, Monday through Thursday 10:00 a.m. to 8 p.m., Friday and Saturday 10:00 a.m. to 5:30 p.m.

The TCEQ requires certain persons to provide recordation in the real property records to notify the public of the conditions of the land and/or the occurrence of remediation. This notification is not a representation or warranty by the TCEQ of the suitability of this land for any purpose.

## II

The Sump103 parcel is 209.1 square feet, more or less, or 0.0048 acre tract located in Harrison County, Texas, near the town of Karnack, being more particularly described with survey plat and metes and bounds established in Exhibit A.

The United States Department of the Army has undertaken careful environmental study of the Sump103 site and USEPA and TCEQ concluded that no further investigation or action is required. Contaminants in soil samples from Sump103 meet non-residential soil criteria in accordance with 30TAC§335.560(b).

Limited monitoring of Sump103 will take place in the form of Letters of Certification from the Army or the Transferee to TCEQ every five years to document that the use of Sump103 is consistent with the non-residential use scenarios evaluated in the risk assessment. Future use of the parcel is intended as a national wildlife refuge consistent with industrial or recreational activities and not for residential purposes. For purposes of this certification, residential use includes, but is not limited to, single family or multi-family residences; child care facilities; nursing home or assisted living facilities; and any type of educational purpose for children/young adults in grades kindergarten through 12.

## III

The owner of the site is the Department of the Army, and its address where more specific information may be obtained is as follows:

ATTN: DAIM-ODB-LO (R. Zeiler)  
Post Office Box 220  
Ratcliff, AR 72951

or

Assistant Chief of Staff for Installation Management  
ATTN: DAIM-ODB (T. Lederle)  
600 Army Pentagon  
Washington D.C. 20310-0600

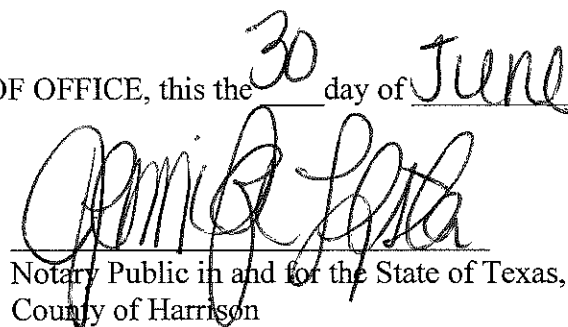
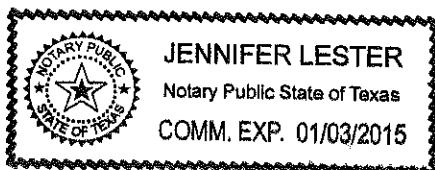


Rose M. Zeiler  
Longhorn AAP Site Manager

EXECUTED this the 30th day of June, 2011.

BEFORE ME, on this the 30th day of June, personally appeared Rose M. Zeiler, of the United States Army, United States Department of Defense, known to me to be the person and agent of said agency whose name is subscribed to the foregoing instrument, and she acknowledged to me that she executed the same for the purposes and in the capacity therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 30 day of June, 2011.



Notary Public in and for the State of Texas,  
County of Harrison

FIELD NOTES DESCRIPTION OF  
SUMP 103  
LONGHORN ARMY AMMUNITION PLANT  
HARRISON COUNTY, TEXAS

The herein described tract of land is located in Harrison County, Texas, near the town of Karnack, being 209.1 square feet of land out of the Longhorn Ordnance Works Reservation (also known as the Longhorn Army Ammunition Plant, Karnack, Texas), said tract being more particularly described as follows :

Surveyor's Note : All bearings and distances herein (unless labeled surface distance) are based on the Texas State Plane Coordinate System, North Central Zone, Code 4202, NAD 1983 (92). The scale factor applied equals 0.9998954238, and is based on surface traverse using electronic total station between type "G" Corps of Engineers monuments "TYLER-1" (N=6958507.460 feet E=3314279.499 feet) and "TYLER-2" (N=6957832.181 feet E=3315168.140 feet). Said traverse indicates a surface distance of 1116.219 feet between said monuments. The computed land area is based on surface distances.

Commencing at monument "TYLER-2" referenced above,

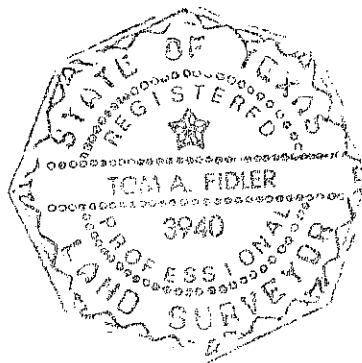
THENCE S 20deg31'34"E 601.43' to a point for the Northmost corner of this sump and this POINT OF BEGINNING,

THENCE along the boundary of this tract the following ten courses :

- (01) S 16deg10'14"E 10.01' to a point for the Eastmost corner of this tract,
- (02) S 73deg49'46"W 9.99' to a point for tract corner,
- (03) N 16deg10'14"W 2.67' to a point for tract corner,
- (04) S 36deg37'46"W 27.57' to a point for the Southmost corner of this tract,
- (05) N 53deg22'14"W 29.02' to a point for the Westmost corner of this tract,
- (06) N 36deg37'46"E 2.10' to a point for tract corner,
- (07) S 53deg22'14"E 27.18' to a point for tract corner,
- (08) N 36deg37'46"E 26.86' to a point for tract corner,
- (09) N 16deg10'14"W 5.03' to a point for tract corner,
- (10) N 73deg49'46"E 9.99' to this POINT OF BEGINNING.

This tract contains 209.1 square feet, more or less.

I, Tom A. Fidler, registered professional land surveyor No. 3940 in the State of Texas, do hereby certify that this field notes description is the result of a survey made on the ground and under my supervision.



A handwritten signature in black ink, appearing to read "Tom A. Fidler", written over a horizontal line.

Tom A. Fidler, R.P.L.S. Number 3940

I, Tom A. Fidler, registered professional land surveyor, No. 3940, do hereby certify that this plat reflects the location of the corners on the tract herein described, as surveyed on the ground and under my supervision in February & March 2011.

Witness my hand and seal March 11, 2011.

STATION TYLER-1 X  
STATE OF TEXAS  
NORTH CENTRAL ZONE  
N=6958507.460 FEET  
E=3314279.499 FEET

BEARING SOURCE  
S 52°46'07.6"E 1116.102'  
(SURFACE TRAVERSE USING  
ELECTRONIC TOTAL STATION  
INDICATES 1116.219')

LANDMARK CONSULTANTS, INC.  
PROFESSIONAL LAND SURVEYORS  
P.O. BOX 606 LONGVIEW, TEXAS 75606  
PHONE (903) 236-3377 FAX (903) 236-3530  
E-MAIL landmark@cablelynx.com

STATION TYLER-2  
STATE OF TEXAS  
NORTH CENTRAL ZONE  
N=6957832.181 FEET  
E=3315168.140 FEET

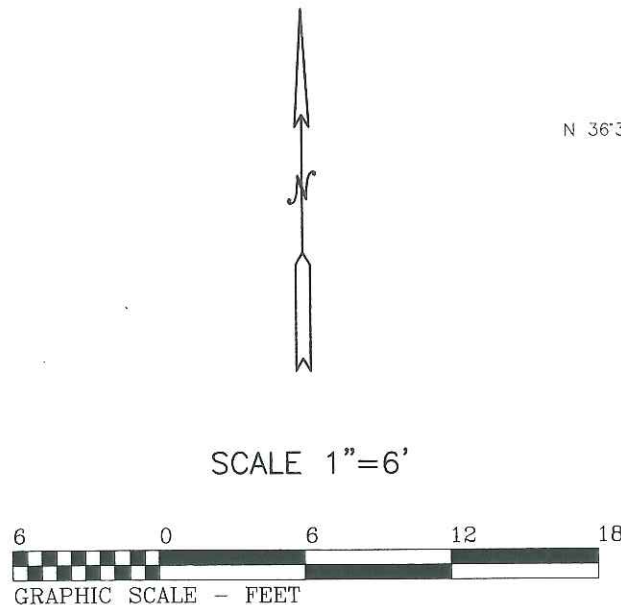
NOTE

ALL BEARINGS, DISTANCES (UNLESS LABELED OTHERWISE), & COORDINATES ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, NORTH CENTRAL ZONE, CODE 4202, NAD 1983 (92). THE SCALE FACTOR APPLIED EQUALS 0.9998954238 & IS BASED ON SURFACE TRAVERSE BETWEEN STATIONS TYLER-1 & TYLER-2. THE COMPUTED LAND AREA IS BASED ON SURFACE DISTANCES.

COORDINATE TABLE

POINT	NORTH	EAST
A	6957268.937	3315379.021
B	6957259.319	3315381.810
C	6957256.536	3315372.213
D	6957259.104	3315371.468
E	6957236.982	3315355.021
F	6957254.297	3315331.731
G	6957255.984	3315332.985
H	6957239.765	3315354.800
I	6957261.320	3315370.825
J	6957266.154	3315369.424

Tom A. Fidler, Registered Professional Land Surveyor, No. 3940



NOTES:

- X INDICATES TYPE "G" CORPS OF ENGINEERS MONUMENT (FOUND)
- O INDICATES UNMARKED CORNER OF SUMP

N 36°37'46"E 2.10'

"G"  
"F"

S 53°22'14"E 27.18'  
N 53°22'14"W 29.02'

SUMP 103  
(209.1 SQ.FT.)

"H"  
"E"

N 36°37'46"E 26.86'  
S 36°37'46"W 27.57'

P.O.B.  
N 73°49'46"E 9.99'  
S 16°10'14"W 5.03'  
N 16°10'14"W 2.67'  
S 73°49'46"W 9.99'  
"A"  
"B"  
"C"  
"D"  
"I"

FIELD NOTES DESCRIPTION  
IS ON SEPARATE SHEET

SUMP 103  
(209.1 SQUARE FEET)  
LONGHORN ARMY AMMUNITION PLANT  
HARRISON COUNTY, TEXAS

JOB #1101007	0407088.CRD	C.PTS C.LEG
MAR. 11, 2011	1103025C.DWG	DRAWN BY JTJ



2012-000000716

\*\*\*DO NOT REMOVE THIS PAGE – IT IS A PART OF THIS INSTRUMENT\*\*\*

## MISCELLANEOUS

6 Pages

FILED AND RECORDED – OPR	CLERKS NOTES
<b>On:</b> <u>01/19/2012 10:41 AM</u>	
<b>Document Number:</b> <u>2012-000000716</u>	
<b>Receipt No:</b> <u>1200645</u>	
<b>Amount:</b> \$ <u>32.00</u>	
<b>By:</b> <u>Ann Turner</u> , Deputy	
<b>Patsy Cox, County Clerk Harrison County, Texas</b>	

STATE OF TEXAS  
COUNTY OF HARRISON

I hereby certify that this instrument was filed on the date and time stamped hereon by me  
and was duly recorded in the Official Public Records of Harrison County, Texas.

Patsy Cox, Harrison County Clerk

---

**Record and Return To:**

SHAW ENVIRONMENTAL & INFRASTRUCTURE GROUP  
1401 ENCLAVE PARKWAY, SUITE 250

HOUSTON, TX 77077



STATE OF TEXAS

HARRISON COUNTY

INDUSTRIAL SOLID WASTE  
NOTICE OF NONRESIDENTIAL LAND USE

KNOW ALL MEN BY THESE PRESENTS THAT:

Pursuant to the Rules of the Texas Commission on Environmental Quality (TCEQ) pertaining to Industrial Solid Waste Management, this document is hereby filed in the Public Records of Harrison County, Texas in compliance with the recordation requirements of said rules:

I

The U.S. Army, Department of Defense, has performed a remediation of the land described herein. Sump104 (called Sump 104 on the attached Exhibit A) is part of LHAAP-35/36. Sump104 is a former sump location near Building 16-T physically located within site boundary of LHAAP-35C(53) of the former Longhorn Army Ammunition Plant (LHAAP). LHAAP was placed on the National Priorities List (NPL) during August 1990. After its listing on the NPL, the U.S. Army, United States Environmental Protection Agency (USEPA), and TCEQ (formerly known as Texas Water Commission) entered into an agreement under the Comprehensive Environmental Response Compensation, and Liability Act (CERCLA) Section 120 for remedial activities. The CERCLA Section 120 Agreement, referred to as the Federal Facility Agreement (FFA), became effective on December 30, 1991. Although there are many sites at LHAAP that are specifically NPL listed, LHAAP-35/36, of which Sump104 is a part, is not considered an NPL site. Environmental activities at LHAAP-35/36 progressed through the site investigation, at which point it was agreed by the Army and the TCEQ, the lead regulatory agency, no significant releases had occurred and the site could be closed under Texas Administrative Code (TAC) Risk Reduction Rule Standard 2.

LHAAP-35/36 is a collection of 125 process sumps and 20 waste rack sumps found in multiple locations across the installation and predominantly associated with process areas. All of the production buildings had sumps that collected wash down water. Sumps (including Sump104) were also associated with wash racks (waste rack sumps) where containers were cleaned and stored. Further information may be found in the

Notice of Registration No. 30990 files, which are available for inspection upon request at TCEQ, Central File Room Customer Service Center, Building E, 12100 Park 35 Circle, Austin, Texas, 78753, (512) 239-2900, Monday through Friday 8:00 a.m. to 5:00 p.m. or in the Administrative Record available at the Marshall Public Library, 300 S. Alamo Blvd, Marshall, Texas 75670, (903) 935-4465, Monday through Thursday 10:00 a.m. to 8 p.m., Friday and Saturday 10:00 a.m. to 5:30 p.m.

The TCEQ requires certain persons to provide recordation in the real property records to notify the public of the conditions of the land and/or the occurrence of remediation. This notification is not a representation or warranty by the TCEQ of the suitability of this land for any purpose.

## II

The Sump104 parcel is 149.2 square feet, more or less, or 0.00342 acre tract located in Harrison County, Texas, near the town of Karnack, being more particularly described with survey plat and metes and bounds established in Exhibit A.

The United States Department of the Army has undertaken careful environmental study of the Sump104 site and USEPA and TCEQ concluded that no further investigation or action is required. Contaminants in soil samples from Sump104 meet non-residential soil criteria in accordance with 30TAC§335.560(b).

Limited monitoring of Sump104 will take place in the form of Letters of Certification from the Army or the Transferee to TCEQ every five years to document that the use of Sump104 is consistent with the non-residential use scenarios evaluated in the risk assessment. Future use of the parcel is intended as a national wildlife refuge consistent with industrial or recreational activities and not for residential purposes. For purposes of this certification, residential use includes, but is not limited to, single family or multi-family residences; child care facilities; nursing home or assisted living facilities; and any type of educational purpose for children/young adults in grades kindergarten through 12.

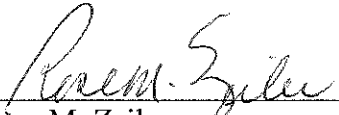
## III

The owner of the site is the Department of the Army, and its address where more specific information may be obtained is as follows:

ATTN: DAIM-ODB-LO (R. Zeiler)  
Post Office Box 220  
Ratcliff, AR 72951

or

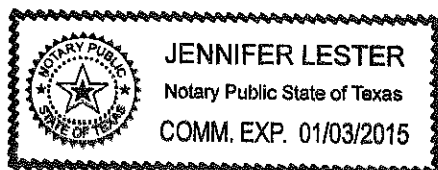
Assistant Chief of Staff for Installation Management  
ATTN: DAIM-ODB (T. Lederle)  
600 Army Pentagon  
Washington D.C. 20310-0600

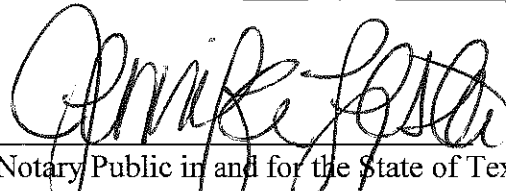
  
Rose M. Zeiler  
Longhorn AAP Site Manager

EXECUTED this the 30th day of June, 2011.

BEFORE ME, on this the 30th day of JUNE, personally appeared Rose M. Zeiler, of the United States Army, United States Department of Defense, known to me to be the person and agent of said agency whose name is subscribed to the foregoing instrument, and she acknowledged to me that she executed the same for the purposes and in the capacity therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 30 day of JUNE, 2011.



  
Notary Public in and for the State of Texas,  
County of Harrison

FIELD NOTES DESCRIPTION OF  
SUMP 104  
LONGHORN ARMY AMMUNITION PLANT  
HARRISON COUNTY, TEXAS

The herein described tract of land is located in Harrison County, Texas, near the town of Karnack, being 149.2 square feet of land out of the Longhorn Ordnance Works Reservation (also known as the Longhorn Army Ammunition Plant, Karnack, Texas), said tract being more particularly described as follows :

Surveyor's Note : All bearings and distances herein (unless labeled surface distance) are based on the Texas State Plane Coordinate System, North Central Zone, Code 4202, NAD 1983 (92). The scale factor applied equals 0.9998954238, and is based on surface traverse using electronic total station between type "G" Corps of Engineers monuments "TYLER-1" (N=6958507.460 feet E=3314279.499 feet) and "TYLER-2" (N=6957832.181 feet E=3315168.140 feet). Said traverse indicates a surface distance of 1116.219 feet between said monuments. The computed land area is based on surface distances.

Commencing at monument "TYLER-2" referenced above,

THENCE S 09deg38'40"E 580.62' to a point for the Northmost corner of this sump and this POINT OF BEGINNING,

THENCE along the boundary of this tract the following eight courses :

- (01) S 53deg22'14"E 23.26' to a point for the Eastmost corner of this tract,
- (02) S 36deg37'46"W 2.24' to a point for tract corner,
- (03) N 53deg22'14"W 20.93' to a point for tract corner,
- (04) S 36deg37'46"W 24.04' to a point for the Southmost corner of this tract,
- (05) N 53deg22'14"W 7.69' to a point for the Westmost corner of this tract,
- (06) N 36deg37'46"E 7.70' to a point for tract corner,
- (07) S 53deg22'14"E 5.37' to a point for tract corner,
- (08) N 36deg37'46"E 18.58' to this POINT OF BEGINNING.

This tract contains 149.2 square feet, more or less.

I, Tom A. Fidler, registered professional land surveyor No. 3940 in the State of Texas, do hereby certify that this field notes description is the result of a survey made on the ground and under my supervision.



Tom A. Fidler, R.P.L.S. Number 3940

I, Tom A. Fidler, registered professional land surveyor, No. 3940, do hereby certify that this plat reflects the location of the corners on the tract herein described, as surveyed on the ground and under my supervision in February & March 2011.

Witness my hand and seal March 11, 2011.

LANDMARK CONSULTANTS, INC.  
PROFESSIONAL LAND SURVEYORS  
P.O. BOX 606 LONGVIEW, TEXAS 75606  
PHONE (903) 236-3377 FAX (903) 236-3530  
E-MAIL landmark@cablelynx.com

STATION TYLER-1  
STATE OF TEXAS  
NORTH CENTRAL ZONE  
N=6958507.460 FEET  
E=3314279.499 FEET

BEARING SOURCE  
S 52°46'07.6"E 1116.102'  
(SURFACE TRAVERSE USING  
ELECTRONIC TOTAL STATION  
INDICATES 1116.219')

STATION TYLER-2  
STATE OF TEXAS  
NORTH CENTRAL ZONE  
N=6957832.181 FEET  
E=3315168.140 FEET

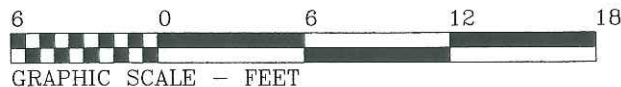
COORDINATE TABLE

POINT	NORTH	EAST
A	6957259.767	3315265.412
B	6957245.891	3315284.077
C	6957244.097	3315282.743
D	6957256.587	3315265.943
E	6957237.294	3315251.599
F	6957241.884	3315245.424
G	6957248.063	3315250.018
H	6957244.859	3315254.328

Tom A. Fidler, Registered Professional Land Surveyor, No. 3940



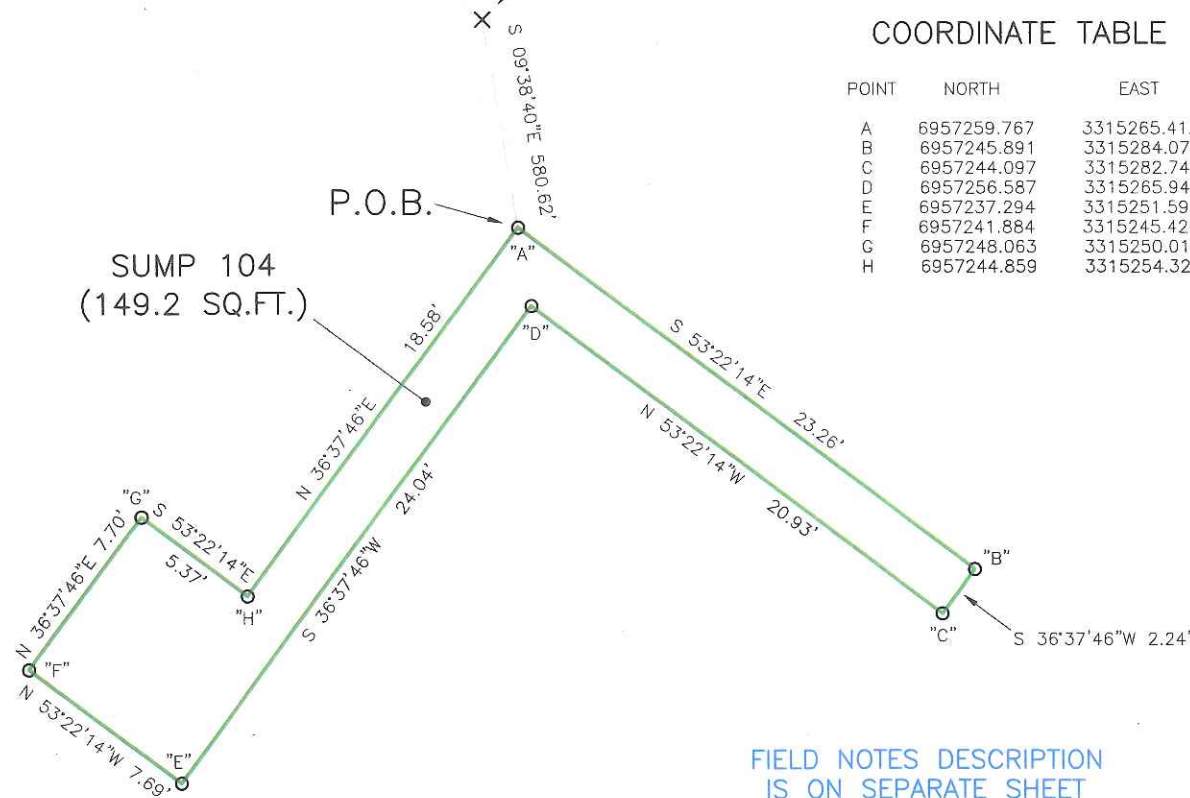
SCALE 1"=6'



NOTES:

- X INDICATES TYPE "G" CORPS OF ENGINEERS MONUMENT (FOUND)
- O INDICATES UNMARKED CORNER OF SUMP

NOTE  
ALL BEARINGS, DISTANCES (UNLESS LABELED OTHERWISE), & COORDINATES ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, NORTH CENTRAL ZONE, CODE 4202, NAD 1983 (92). THE SCALE FACTOR APPLIED EQUALS 0.9998954238 & IS BASED ON SURFACE TRAVERSE BETWEEN STATIONS TYLER-1 & TYLER-2. THE COMPUTED LAND AREA IS BASED ON SURFACE DISTANCES.



FIELD NOTES DESCRIPTION  
IS ON SEPARATE SHEET

SUMP 104  
(149.2 SQUARE FEET)  
LONGHORN ARMY AMMUNITION PLANT  
HARRISON COUNTY, TEXAS

JOB #1101007	0407088.CRD	D.PTS D.LEG
MAR. 11, 2011	1103025D.DWG	DRAWN BY JTJ

2012-000000717

\*\*\*DO NOT REMOVE THIS PAGE – IT IS A PART OF THIS INSTRUMENT\*\*\*

## MISCELLANEOUS

6 Pages

FILED AND RECORDED – OPR	CLERKS NOTES
<b>On:</b> <u>01/19/2012 10:41 AM</u>	
<b>Document Number:</b> <u>2012-000000717</u>	
<b>Receipt No:</b> <u>1200645</u>	
<b>Amount:</b> \$ <u>32.00</u>	
<b>By:</b> <u>Ann Turner</u> , Deputy	
<b>Patsy Cox, County Clerk Harrison County, Texas</b>	

STATE OF TEXAS  
COUNTY OF HARRISONI hereby certify that this instrument was filed on the date and time stamped hereon by me  
and was duly recorded in the Official Public Records of Harrison County, Texas.

Patsy Cox, Harrison County Clerk

Record and Return To:

SHAW ENVIRONMENTAL & INFRASTRUCTURE GROUP  
1401 ENCLAVE PARKWAY, SUITE 250

HOUSTON, TX 77077

STATE OF TEXAS

HARRISON COUNTY

INDUSTRIAL SOLID WASTE  
NOTICE OF NONRESIDENTIAL LAND USE

KNOW ALL MEN BY THESE PRESENTS THAT:

Pursuant to the Rules of the Texas Commission on Environmental Quality (TCEQ) pertaining to Industrial Solid Waste Management, this document is hereby filed in the Public Records of Harrison County, Texas in compliance with the recordation requirements of said rules:

I

The U.S. Army, Department of Defense, has performed a remediation of the land described herein. Sump105 (called Sump 105 on the attached Exhibit A) is part of LHAAP-35/36. Sump105 is a former sump location near Building 16-T physically located within site boundary of LHAAP-35C(53) of the former Longhorn Army Ammunition Plant (LHAAP). LHAAP was placed on the National Priorities List (NPL) during August 1990. After its listing on the NPL, the U.S. Army, United States Environmental Protection Agency (USEPA), and TCEQ (formerly known as Texas Water Commission) entered into an agreement under the Comprehensive Environmental Response Compensation, and Liability Act (CERCLA) Section 120 for remedial activities. The CERCLA Section 120 Agreement, referred to as the Federal Facility Agreement (FFA), became effective on December 30, 1991. Although there are many sites at LHAAP that are specifically NPL listed, LHAAP-35/36, of which Sump105 is a part, is not considered an NPL site. Environmental activities at LHAAP-35/36 progressed through the site investigation, at which point it was agreed by the Army and the TCEQ, the lead regulatory agency, no significant releases had occurred and the site could be closed under Texas Administrative Code (TAC) Risk Reduction Rule Standard 2.

LHAAP-35/36 is a collection of 125 process sumps and 20 waste rack sumps found in multiple locations across the installation and predominantly associated with process areas. All of the production buildings had sumps that collected wash down water. Sumps (including Sump105) were also associated with wash racks (waste rack sumps) where containers were cleaned and stored. Further information may be found in the Notice of Registration No. 30990 files, which are available for inspection upon request at

TCEQ, Central File Room Customer Service Center, Building E, 12100 Park 35 Circle, Austin, Texas, 78753, (512) 239-2900, Monday through Friday 8:00 a.m. to 5:00 p.m. or in the Administrative Record available at the Marshall Public Library, 300 S. Alamo Blvd, Marshall, Texas 75670, (903) 935-4465, Monday through Thursday 10:00 a.m. to 8 p.m., Friday and Saturday 10:00 a.m. to 5:30 p.m.

The TCEQ requires certain persons to provide recordation in the real property records to notify the public of the conditions of the land and/or the occurrence of remediation. This notification is not a representation or warranty by the TCEQ of the suitability of this land for any purpose.

## II

The Sump105 parcel is 201.7 square feet, more or less, or 0.00463 acre tract located in Harrison County, Texas, near the town of Karnack, being more particularly described with survey plat and metes and bounds established in Exhibit A.

The United States Department of the Army has undertaken careful environmental study of the Sump105 site and USEPA and TCEQ concluded that no further investigation or action is required. Contaminants in soil samples from Sump105 meet non-residential soil criteria in accordance with 30TAC§335.560(b).

Limited monitoring of Sump105 will take place in the form of Letters of Certification from the Army or the Transferee to TCEQ every five years to document that the use of Sump105 is consistent with the non-residential use scenarios evaluated in the risk assessment. Future use of the parcel is intended as a national wildlife refuge consistent with industrial or recreational activities and not for residential purposes. For purposes of this certification, residential use includes, but is not limited to, single family or multi-family residences; child care facilities; nursing home or assisted living facilities; and any type of educational purpose for children/young adults in grades kindergarten through 12.

## III

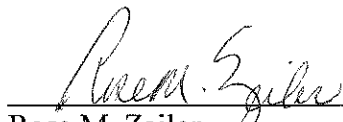
The owner of the site is the Department of the Army, and its address where more specific information may be obtained is as follows:

ATTN: DAIM-ODB-LO (R. Zeiler)  
Post Office Box 220  
Ratcliff, AR 72951

or



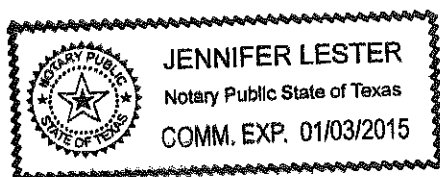
Assistant Chief of Staff for Installation Management  
ATTN: DAIM-ODB (T. Lederle)  
600 Army Pentagon  
Washington D.C. 20310-0600


  
\_\_\_\_\_  
Rose M. Zeiler  
Longhorn AAP Site Manager

EXECUTED this the 30th day of June, 2011.

BEFORE ME, on this the 30th day of June, personally appeared Rose M. Zeiler, of the United States Army, United States Department of Defense, known to me to be the person and agent of said agency whose name is subscribed to the foregoing instrument, and she acknowledged to me that she executed the same for the purposes and in the capacity therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 30 day of June, 2011.



  
\_\_\_\_\_  
Notary Public in and for the State of Texas,  
County of Harrison

FIELD NOTES DESCRIPTION OF  
SUMP 105  
LONGHORN ARMY AMMUNITION PLANT  
HARRISON COUNTY, TEXAS

The herein described tract of land is located in Harrison County, Texas, near the town of Karnack, being 201.7 square feet of land out of the Longhorn Ordnance Works Reservation (also known as the Longhorn Army Ammunition Plant, Karnack, Texas), said tract being more particularly described as follows :

Surveyor's Note : All bearings and distances herein (unless labeled surface distance) are based on the Texas State Plane Coordinate System, North Central Zone, Code 4202, NAD 1983 (92). The scale factor applied equals 0.9998954238, and is based on surface traverse using electronic total station between type "G" Corps of Engineers monuments "TYLER-1" (N=6958507.460 feet E=3314279.499 feet) and "TYLER-2" (N=6957832.181 feet E=3315168.140 feet). Said traverse indicates a surface distance of 1116.219 feet between said monuments. The computed land area is based on surface distances.

Commencing at monument "TYLER-2" referenced above,

THENCE S 13deg17'42"E 623.38' to a point for the Northmost corner of this sump and this POINT OF BEGINNING,

THENCE along the boundary of this tract the following eight courses :

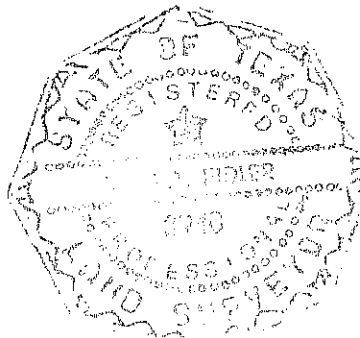
- (01) S 53deg22'14"E 26.51' to a point for the Eastmost corner of this tract,
- (02) S 36deg37'46"W 15.65' to a point for tract corner,
- (03) S 53deg22'14"E 8.85' to a point for tract corner,
- (04) S 36deg37'46"W 10.63' to a point for the Southmost corner of this tract,
- (05) N 53deg22'14"W 10.86' to a point for tract corner,
- (06) N 36deg37'46"E 24.04' to a point for tract corner,
- (07) N 53deg22'14"W 24.50' to a point for the Westmost corner of this tract,
- (08) N 36deg37'46"E 2.24' to this POINT OF BEGINNING.

This tract contains 201.7 square feet, more or less.

I, Tom A. Fidler, registered professional land surveyor No. 3940 in the State of Texas, do hereby certify that this field notes description is the result of a survey made on the ground and under my supervision.



Tom A. Fidler, R.P.L.S. Number 3940



LANDMARK CONSULTANTS, INC.  
PROFESSIONAL LAND SURVEYORS

P.O. BOX 606      LONGVIEW, TEXAS 75606  
PHONE (903) 236-3377      FAX (903) 236-3530  
E-MAIL    landmark@cablelynx.com

STATION TYLER-1  
STATE OF TEXAS  
NORTH CENTRAL ZONE  
N=6958507.460 FEET  
E=3314279.499 FEET

BEARING SOURCE  
S 52°46'07.6"E 1116.102'  
(SURFACE TRAVERSE USING  
ELECTRONIC TOTAL STATION  
INDICATES 1116.219')

STATION TYLER-2  
STATE OF TEXAS  
NORTH CENTRAL ZONE  
N=6957832.181 FEET  
E=3315168.140 FEET

NOTE

ALL BEARINGS, DISTANCES (UNLESS LABELED OTHERWISE), & COORDINATES ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, NORTH CENTRAL ZONE, CODE 4202, NAD 1983 (92). THE SCALE FACTOR APPLIED EQUALS 0.9998954238 & IS BASED ON SURFACE TRAVERSE BETWEEN STATIONS TYLER-1 & TYLER-2. THE COMPUTED LAND AREA IS BASED ON SURFACE DISTANCES.

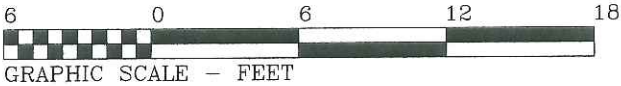
COORDINATE TABLE

POINT	NORTH	EAST
A	6957225.505	3315311.497
B	6957209.690	3315332.769
C	6957197.135	3315323.434
D	6957191.856	3315330.535
E	6957183.323	3315324.191
F	6957189.801	3315315.477
G	6957209.095	3315329.822
H	6957223.711	3315310.163

P.O.B.  
N 36°37'46"E 2.24'

SUMP 105  
(201.7 SQ.FT.)

SCALE 1"=6'



I, Tom A. Fidler, registered professional land surveyor, No. 3940, do hereby certify that this plat reflects the location of the corners on the tract herein described, as surveyed on the ground and under my supervision in February & March 2011.

Witness my hand and seal March 11, 2011.

NOTES:

- ✕ INDICATES TYPE "G" CORPS OF ENGINEERS MONUMENT (FOUND)
- INDICATES UNMARKED CORNER OF SUMP

FIELD NOTES DESCRIPTION  
IS ON SEPARATE SHEET



Tom A. Fidler, Registered Professional Land Surveyor, No. 3940

SUMP 105  
(201.7 SQUARE FEET)  
LONGHORN ARMY AMMUNITION PLANT  
HARRISON COUNTY, TEXAS

JOB #1101007	0407088.CRD	E.PTS	E.LEG
MAR. 11, 2011	1103025E.DWG	DRAWN BY JTG	

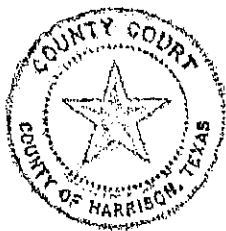
2012-000000718

\*\*\*DO NOT REMOVE THIS PAGE – IT IS A PART OF THIS INSTRUMENT\*\*\*

## MISCELLANEOUS

6 Pages

FILED AND RECORDED -- OPR	CLERKS NOTES
On: <u>01/19/2012 10:41 AM</u>	
Document Number: <u>2012-000000718</u>	
Receipt No: <u>1200645</u>	
Amount: \$ <u>32.00</u>	
By: <u>Ann Turner</u> , Deputy	
<b>Patsy Cox, County Clerk Harrison County, Texas</b>	

STATE OF TEXAS  
COUNTY OF HARRISON

I hereby certify that this instrument was filed on the date and time stamped hereon by me  
and was duly recorded in the Official Public Records of Harrison County, Texas.

Patsy Cox, Harrison County Clerk

---

**Record and Return To:**SHAW ENVIRONMENTAL & INFRASTRUCTION GROUP  
1401 ENCLAVE PARKWAY, SUITE 250

HOUSTON, TX 77077

STATE OF TEXAS

HARRISON COUNTY

INDUSTRIAL SOLID WASTE  
NOTICE OF NONRESIDENTIAL LAND USE

KNOW ALL MEN BY THESE PRESENTS THAT:

Pursuant to the Rules of the Texas Commission on Environmental Quality (TCEQ) pertaining to Industrial Solid Waste Management, this document is hereby filed in the Public Records of Harrison County, Texas in compliance with the recordation requirements of said rules:

I

The U.S. Army, Department of Defense, has performed a remediation of the land described herein. Sump123 (called Sump 123 on the attached Exhibit A) is part of LHAAP-35/36. Sump123 is a former sump location near Building 18-Y physically located within site boundary of LHAAP-48 of the former Longhorn Army Ammunition Plant (LHAAP). LHAAP was placed on the National Priorities List (NPL) during August 1990. After its listing on the NPL, the U.S. Army, United States Environmental Protection Agency (USEPA), and TCEQ (formerly known as Texas Water Commission) entered into an agreement under the Comprehensive Environmental Response Compensation, and Liability Act (CERCLA) Section 120 for remedial activities. The CERCLA Section 120 Agreement, referred to as the Federal Facility Agreement (FFA), became effective on December 30, 1991. Although there are many sites at LHAAP that are specifically NPL listed, LHAAP-35/36, of which Sump123 is a part, is not considered an NPL site. Environmental activities at LHAAP-35/36 progressed through the site investigation, at which point it was agreed by the Army and the TCEQ, the lead regulatory agency, no significant releases had occurred and the site could be closed under Texas Administrative Code (TAC) Risk Reduction Rule Standard 2.

LHAAP-35/36 is a collection of 125 process sumps and 20 waste rack sumps found in multiple locations across the installation and predominantly associated with process areas. All of the production buildings had sumps that collected wash down water. Sumps (including Sump123) were also associated with wash racks (waste rack sumps) where containers were cleaned and stored. Further information may be found in the Notice of Registration No. 30990 files, which are available for inspection upon request at

TCEQ, Central File Room Customer Service Center, Building E, 12100 Park 35 Circle, Austin, Texas, 78753, (512) 239-2900, Monday through Friday 8:00 a.m. to 5:00 p.m. or in the Administrative Record available at the Marshall Public Library, 300 S. Alamo Blvd, Marshall, Texas 75670, (903) 935-4465, Monday through Thursday 10:00 a.m. to 8 p.m., Friday and Saturday 10:00 a.m. to 5:30 p.m.

The TCEQ requires certain persons to provide recordation in the real property records to notify the public of the conditions of the land and/or the occurrence of remediation. This notification is not a representation or warranty by the TCEQ of the suitability of this land for any purpose.

## II

The Sump123 parcel is 60 square feet, more or less, or 0.00137 acre tract located in Harrison County, Texas, near the town of Karnack, being more particularly described with survey plat and metes and bounds established in Exhibit A.

The United States Department of the Army has undertaken careful environmental study of the Sump123 site and USEPA and TCEQ concluded that no further investigation or action is required. Contaminants in soil samples from Sump123 meet non-residential soil criteria in accordance with 30TAC§335.560(b).

Limited monitoring of Sump123 will take place in the form of Letters of Certification from the Army or the Transferee to TCEQ every five years to document that the use of Sump123 is consistent with the non-residential use scenarios evaluated in the risk assessment. Future use of the parcel is intended as a national wildlife refuge consistent with industrial or recreational activities and not for residential purposes. For purposes of this certification, residential use includes, but is not limited to, single family or multi-family residences; child care facilities; nursing home or assisted living facilities; and any type of educational purpose for children/young adults in grades kindergarten through 12.

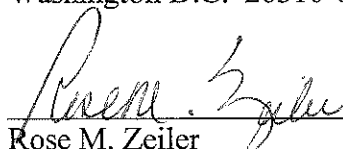
## III

The owner of the site is the Department of the Army, and its address where more specific information may be obtained is as follows:

ATTN: DAIM-ODB-LO (R. Zeiler)  
Post Office Box 220  
Ratcliff, AR 72951

or

Assistant Chief of Staff for Installation Management  
ATTN: DAIM-ODB (T. Lederle)  
600 Army Pentagon  
Washington D.C. 20310-0600

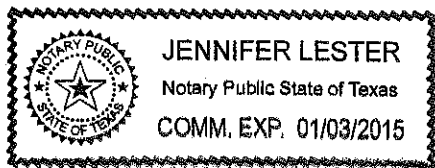
  
\_\_\_\_\_  
Rose M. Zeiler

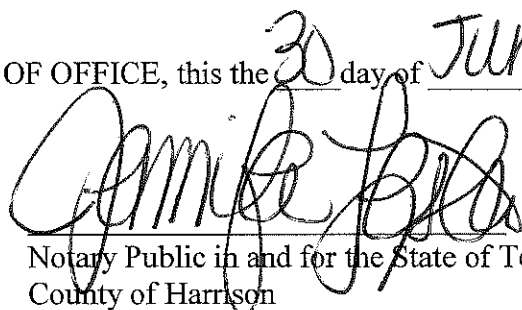
Longhorn AAP Site Manager

EXECUTED this the 30th day of June, 2011.

BEFORE ME, on this the 30th day of June, personally appeared Rose M. Zeiler, of the United States Army, United States Department of Defense, known to me to be the person and agent of said agency whose name is subscribed to the foregoing instrument, and she acknowledged to me that she executed the same for the purposes and in the capacity therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 30 day of June, 2011.



  
\_\_\_\_\_  
Notary Public in and for the State of Texas,  
County of Harrison

FIELD NOTES DESCRIPTION OF  
SUMP 123  
LONGHORN ARMY AMMUNITION PLANT  
HARRISON COUNTY, TEXAS

The herein described tract of land is located in Harrison County, Texas, near the town of Karnack, being 60.0 square feet of land out of the Longhorn Ordnance Works Reservation (also known as the Longhorn Army Ammunition Plant, Karnack, Texas), said tract being more particularly described as follows :

Surveyor's Note : All bearings and distances herein (unless labeled surface distance) are based on the Texas State Plane Coordinate System, North Central Zone, Code 4202, NAD 1983 (92). The scale factor applied equals 0.9998954238, and is based on surface traverse using electronic total station between type "G" Corps of Engineers monuments "TYLER-1" (N=6958507.460 feet E=3314279.499 feet) and "TYLER-2" (N=6957832.181 feet E=3315168.140 feet). Said traverse indicates a surface distance of 1116.219 feet between said monuments. The computed land area is based on surface distances.

Commencing at monument "TYLER-1" referenced above,

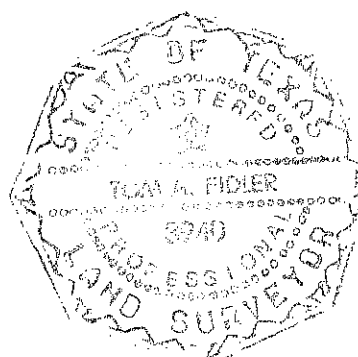
THENCE N 07deg59'31"W 569.56' to a point for the Southmost corner of this sump and this POINT OF BEGINNING,

THENCE along the boundary of this tract the following four courses :

- (01) N 37deg59'57"W 6.00' to a point for the Westmost corner of this tract,
- (02) N 52deg00'03"E 10.00' to a point for the Northmost corner of this tract,
- (03) S 37deg59'57"E 6.00' to a point for the Eastmost corner of this tract,
- (04) S 52deg00'03"W 10.00' to this POINT OF BEGINNING.

This tract contains 60.0 square feet, more or less.

I, Tom A. Fidler, registered professional land surveyor No. 3940 in the State of Texas, do hereby certify that this field notes description is the result of a survey made on the ground and under my supervision.

Tom A. Fidler, R.P.L.S. Number 3940



NOTE

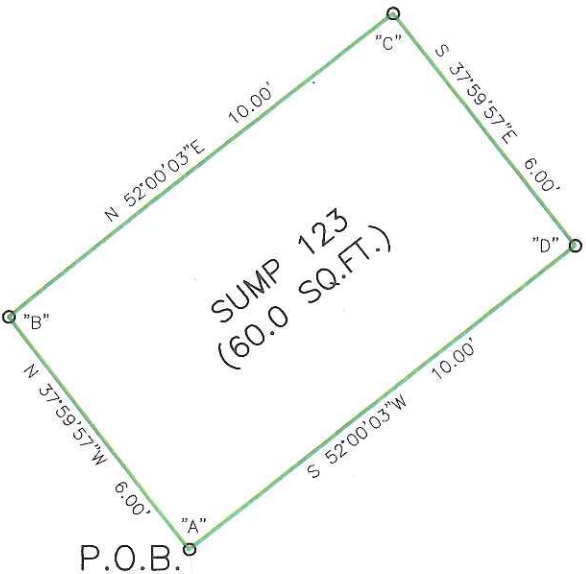
ALL BEARINGS, DISTANCES (UNLESS LABELED OTHERWISE), & COORDINATES ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, NORTH CENTRAL ZONE, CODE 4202, NAD 1983 (92). THE SCALE FACTOR APPLIED EQUALS 0.9998954238 & IS BASED ON SURFACE TRAVERSE BETWEEN STATIONS TYLER-1 & TYLER-2. THE COMPUTED LAND AREA IS BASED ON SURFACE DISTANCES.

NOTES

- X INDICATES TYPE "G" CORPS OF ENGINEERS MONUMENT (FOUND)
- INDICATES UNMARKED CORNER OF SUMP

COORDINATE TABLE

POINT	NORTH	EAST
A	6959122.758	3314187.907
B	6959127.486	3314184.213
C	6959133.642	3314192.093
D	6959128.914	3314195.787



I, Tom A. Fidler, registered professional land surveyor, No. 3940, do hereby certify that this plat reflects the location of the corners on the tract herein described, as surveyed on the ground and under my supervision in February & March 2011.

Witness my hand and seal March 14, 2011.

STATION TYLER-1  
STATE OF TEXAS  
NORTH CENTRAL ZONE  
N=6958507.460 FEET  
E=3314279.499 FEET

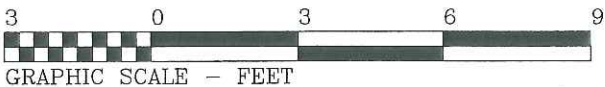
BEARING SOURCE  
S 52°46'07.6"E 1116.102'  
(SURFACE TRAVERSE USING  
ELECTRONIC TOTAL STATION  
INDICATES 1116.219')

STATION TYLER-2  
STATE OF TEXAS  
NORTH CENTRAL ZONE  
N=6957832.181 FEET  
E=3315168.140 FEET

Tom A. Fidler, Registered Professional Land Surveyor, No. 3940



SCALE 1"=3'



FIELD NOTES DESCRIPTION  
IS ON SEPARATE SHEET

SUMP 123  
(60.0 SQUARE FEET)  
LONGHORN ARMY AMMUNITION PLANT  
HARRISON COUNTY, TEXAS

JOB #0407088	0407088.CRD	I.PTS	I.LEG
03/14/2011	1103025I.DWG		DRAWN BY JTJ

2012-000000719

\*\*\*DO NOT REMOVE THIS PAGE – IT IS A PART OF THIS INSTRUMENT\*\*\*

## MISCELLANEOUS

6 Pages

FILED AND RECORDED – OPR	CLERKS NOTES
<b>On:</b> <u>01/19/2012 10:41 AM</u>	
<b>Document Number:</b> <u>2012-000000719</u>	
<b>Receipt No:</b> <u>1200645</u>	
<b>Amount:</b> \$ <u>32.00</u>	
<b>By:</b> <u>Ann Turner</u> , Deputy	
<b>Patsy Cox, County Clerk Harrison County, Texas</b>	

STATE OF TEXAS  
COUNTY OF HARRISON

I hereby certify that this instrument was filed on the date and time stamped hereon by me  
and was duly recorded in the Official Public Records of Harrison County, Texas.

Patsy Cox, Harrison County Clerk

---

**Record and Return To:**

SHAW ENVIRONMENTAL & INFRASTRUCTION GROUP  
1401 ENCLAVE PARKWAY, SUITE 250

HOUSTON, TX 77077

STATE OF TEXAS

HARRISON COUNTY

INDUSTRIAL SOLID WASTE  
NOTICE OF NONRESIDENTIAL LAND USE

KNOW ALL MEN BY THESE PRESENTS THAT:

Pursuant to the Rules of the Texas Commission on Environmental Quality (TCEQ) pertaining to Industrial Solid Waste Management, this document is hereby filed in the Public Records of Harrison County, Texas in compliance with the recordation requirements of said rules:

I

The U.S. Army, Department of Defense, has performed a remediation of the land described herein. WRSump001 (called W.R. Sump 001 on the attached Exhibit A) is part of LHAAP-35/36. WRSump001 is a former waste rack sump location near Building 34-Y physically located within site boundary of LHAAP-48 of the former Longhorn Army Ammunition Plant (LHAAP). LHAAP was placed on the National Priorities List (NPL) during August 1990. After its listing on the NPL, the U.S. Army, United States Environmental Protection Agency (USEPA), and TCEQ (formerly known as Texas Water Commission) entered into an agreement under the Comprehensive Environmental Response Compensation, and Liability Act (CERCLA) Section 120 for remedial activities. The CERCLA Section 120 Agreement, referred to as the Federal Facility Agreement (FFA), became effective on December 30, 1991. Although there are many sites at LHAAP that are specifically NPL listed, LHAAP-35/36 of which WRSump001 is a part is not considered an NPL site. Environmental activities at LHAAP-35/36 progressed through the site investigation, at which point it was agreed by the Army and the TCEQ, the lead regulatory agency, no significant releases had occurred and the site could be closed under Texas Administrative Code (TAC) Risk Reduction Rule Standard 2, no further action.

LHAAP-35/36 is a collection of 125 process sumps and 20 waste rack sumps found in multiple locations across the installation and predominantly associated with process areas. All of the production buildings had sumps that collected wash down water. Sumps were also associated with wash racks (waste rack sumps including WRSump001) where containers were cleaned and stored. Further information may be found in the

Notice of Registration No. 30990 files, which are available for inspection upon request at TCEQ, Central File Room Customer Service Center, Building E, 12100 Park 35 Circle, Austin, Texas, 78753, (512) 239-2900, Monday through Friday 8:00 a.m. to 5:00 p.m. or in the Administrative Record available at the Marshall Public Library, 300 S. Alamo Blvd, Marshall, Texas 75670, (903) 935-4465, Monday through Thursday 10:00 a.m. to 8 p.m., Friday and Saturday 10:00 a.m. to 5:30 p.m.

The TCEQ requires certain persons to provide recordation in the real property records to notify the public of the conditions of the land and/or the occurrence of remediation. This notification is not a representation or warranty by the TCEQ of the suitability of this land for any purpose.

## II

The WRSump001 parcel is 57.1 square feet, more or less, or 0.00131 acre tract located in Harrison County, Texas, near the town of Karnack, being more particularly described with survey plat and metes and bounds established in Exhibit A.

The United States Department of the Army has undertaken careful environmental study of the WRSump001 site and USEPA and TCEQ concluded that no further investigation or action is required. Contaminants in soil samples from WRSump001 meet non-residential soil criteria in accordance with 30TAC§335.560(b).

Limited monitoring of WRSump001 will take place in the form of Letters of Certification from the Army or the Transferee to TCEQ every five years to document that the use of WRSump001 is consistent with the non-residential use scenarios evaluated in the risk assessment. Future use of the parcel is intended as a national wildlife refuge consistent with industrial or recreational activities and not for residential purposes. For purposes of this certification, residential use includes, but is not limited to, single family or multi-family residences; child care facilities; nursing home or assisted living facilities; and any type of educational purpose for children/young adults in grades kindergarten through 12.


## III

The owner of the site is the Department of the Army, and its address where more specific information may be obtained is as follows:

ATTN: DAIM-ODB-LO (R. Zeiler)  
Post Office Box 220  
Ratcliff, AR 72951

or

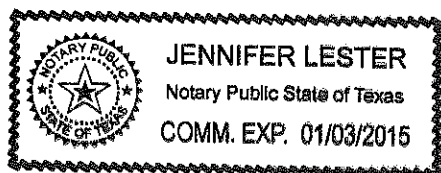
Assistant Chief of Staff for Installation Management  
ATTN: DAIM-ODB (T. Lederle)  
600 Army Pentagon  
Washington D.C. 20310-0600

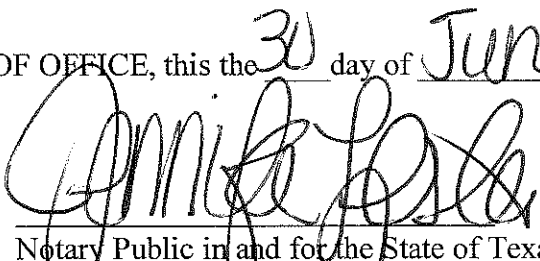
  
\_\_\_\_\_  
Rose M. Zeiler  
Longhorn AAP Site Manager

EXECUTED this the 30th day of June, 2011.

BEFORE ME, on this the 30th day of June, personally appeared Rose M. Zeiler, of the United States Army, United States Department of Defense, known to me to be the person and agent of said agency whose name is subscribed to the foregoing instrument, and she acknowledged to me that she executed the same for the purposes and in the capacity therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 30 day of June, 2011.



  
\_\_\_\_\_  
Notary Public in and for the State of Texas,  
County of Harrison

FIELD NOTES DESCRIPTION OF  
W.R. SUMP 001  
LONGHORN ARMY AMMUNITION PLANT  
HARRISON COUNTY, TEXAS

The herein described tract of land is located in Harrison County, Texas, near the town of Karnack, being 57.1 square feet of land out of the Longhorn Ordnance Works Reservation (also known as the Longhorn Army Ammunition Plant, Karnack, Texas), said tract being more particularly described as follows :

Surveyor's Note : All bearings and distances herein (unless labeled surface distance) are based on the Texas State Plane Coordinate System, North Central Zone, Code 4202, NAD 1983 (92). The scale factor applied equals 0.9998954238, and is based on surface traverse using electronic total station between type "G" Corps of Engineers monuments "TYLER-1" (N=6958507.460 feet E=3314279.499 feet) and "TYLER-2" (N=6957832.181 feet E=3315168.140 feet). Said traverse indicates a surface distance of 1116.219 feet between said monuments. The computed land area is based on surface distances.

Commencing at monument "TYLER-1" referenced above,

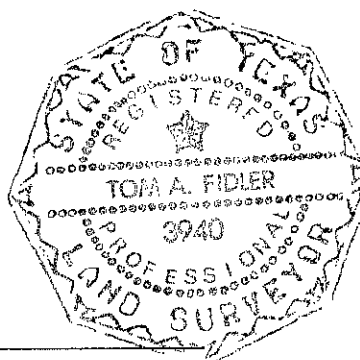
THENCE N 42deg37'08"E 700.32' to this POINT OF BEGINNING, said point being at the Southmost corner of the external face of the concrete wall which defines this sump,

THENCE along the external face of the concrete wall which defines this sump the following twelve courses, each course ending at a corner of the external face of said concrete wall :

(01)	N 36deg36'16"W	4.50',	
(02)	N 51deg51'25"E	1.07',	
(03)	N 38deg08'35"W	2.46',	
(04)	S 63deg07'08"W	0.85',	
(05)	N 38deg08'35"W	7.98',	being this sump's Westmost corner,
(06)	N 51deg51'25"E	3.70',	being this sump's Northmost corner,
(07)	S 39deg59'44"E	8.17',	
(08)	S 52deg07'09"W	1.00',	
(09)	S 39deg59'44"E	2.34',	
(10)	N 50deg00'16"E	1.14',	
(11)	S 39deg59'44"E	4.67',	being this sump's Eastmost corner,
(12)	S 52deg10'33"W	4.68',	being the aforementioned POINT OF BEGINNING.

This tract contains 57.1 square feet, more or less.

I, Tom A. Fidler, registered professional land surveyor No. 3940 in the State of Texas, do hereby certify that this field notes description is the result of a survey made on the ground and under my supervision.



Tom A. Fidler, R.P.L.S. Number 3940



NOTES:

- X INDICATES TYPE "G" CORPS OF ENGINEERS MONUMENT (FOUND)
- INDICATES CORNER OF EXTERNAL FACE OF CONCRETE WALL
- INDICATES UNMARKED POINT

NOTE

ALL BEARINGS, DISTANCES (UNLESS LABELED OTHERWISE), & COORDINATES ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, NORTH CENTRAL ZONE, CODE 4202, NAD 1983 (92). THE SCALE FACTOR APPLIED EQUALS 0.9998954238 & IS BASED ON SURFACE TRAVERSE BETWEEN STATIONS TYLER-1 & TYLER-2. THE COMPUTED LAND AREA IS BASED ON SURFACE DISTANCES.

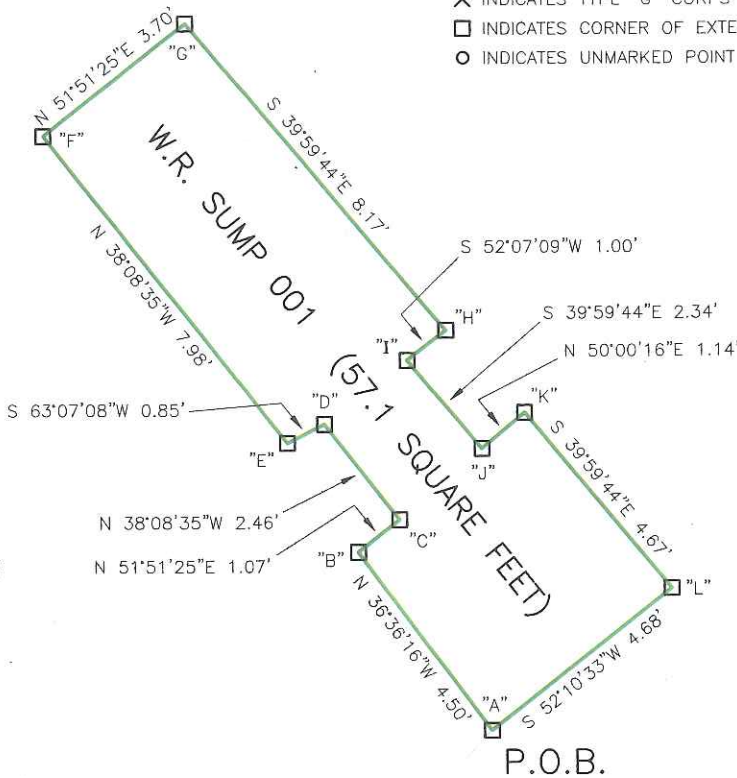
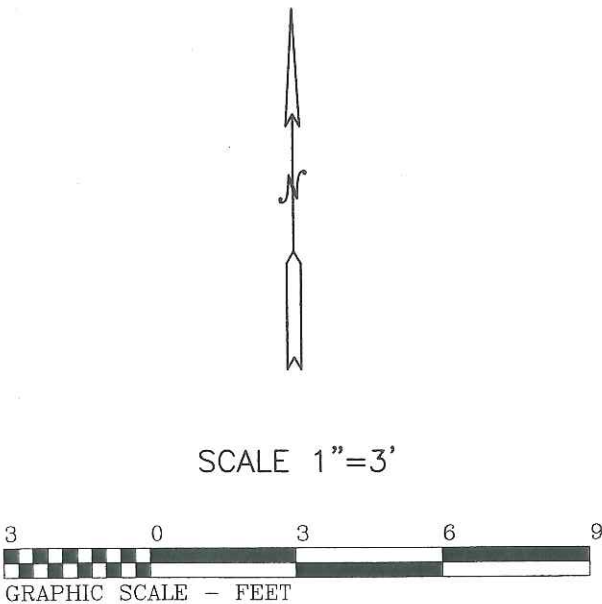
COORDINATE TABLE

POINT	NORTH	EAST
A	6959022.804	3314753.696
B	6959026.415	3314751.014
C	6959027.074	3314751.854
D	6959029.012	3314750.332
E	6959028.627	3314749.573
F	6959034.899	3314744.647
G	6959037.183	3314747.555
H	6959030.925	3314752.805
I	6959030.313	3314752.018
J	6959028.519	3314753.523
K	6959029.252	3314754.396
L	6959025.676	3314757.396
M	6959022.804	3314753.696

FIELD NOTES DESCRIPTION  
IS ON SEPARATE SHEETS

W.R. SUMP 001  
(57.1 SQUARE FEET)  
LONGHORN ARMY AMMUNITION PLANT  
HARRISON COUNTY, TEXAS

JOB #0407088	0407088.CRD	W.PTS	W.LEG
MAR. 1, 2011	0908074W.DWG	DRAWN BY	JTJ



I, Tom A. Fidler, registered professional land surveyor, No. 3940, do hereby certify that this plat reflects the location of the corners on the tract herein described, as surveyed on the ground and under my supervision in February & March 2011.

Witness my hand and seal March 1, 2011.

Tom A. Fidler, Registered Professional Land Surveyor, No. 3940

BEARING SOURCE  
S 52°46'07.6"E 1116.102'  
(SURFACE TRAVERSE USING  
ELECTRONIC TOTAL STATION  
INDICATES 1116.219')

STATION TYLER-2  
STATE OF TEXAS  
NORTH CENTRAL ZONE  
N=6957832.181 FEET  
E=3315168.140 FEET

2012-000000720

\*\*\*DO NOT REMOVE THIS PAGE – IT IS A PART OF THIS INSTRUMENT\*\*\*

## MISCELLANEOUS

6 Pages

FILED AND RECORDED – OPR	CLERKS NOTES
<b>On:</b> <u>01/19/2012 10:41 AM</u>	
<b>Document Number:</b> <u>2012-000000720</u>	
<b>Receipt No:</b> <u>1200645</u>	
<b>Amount:</b> \$ <u>32.00</u>	
<b>By:</b> <u>Ann Turner</u> , Deputy	
<b>Patsy Cox, County Clerk Harrison County, Texas</b>	

STATE OF TEXAS  
COUNTY OF HARRISONI hereby certify that this instrument was filed on the date and time stamped hereon by me  
and was duly recorded in the Official Public Records of Harrison County, Texas.

Patsy Cox, Harrison County Clerk

Record and Return To:

SHAW ENVIRONMENTAL & INFRASTRUCTION GROUP  
1401 ENCLAVE PARKWAY, SUITE 250

HOUSTON, TX 77077



STATE OF TEXAS

HARRISON COUNTY

INDUSTRIAL SOLID WASTE  
NOTICE OF NONRESIDENTIAL LAND USE

KNOW ALL MEN BY THESE PRESENTS THAT:

Pursuant to the Rules of the Texas Commission on Environmental Quality (TCEQ) pertaining to Industrial Solid Waste Management, this document is hereby filed in the Public Records of Harrison County, Texas in compliance with the recordation requirements of said rules:

I

The U.S. Army, Department of Defense, has performed a remediation of the land described herein. WRSump002 (called W.R. Sump 002 on the attached Exhibit A) is part of LHAAP-35/36. WRSump002 is a former waste rack sump location near Building 38-Y physically located within site boundary of LHAAP-48 of the former Longhorn Army Ammunition Plant (LHAAP). LHAAP was placed on the National Priorities List (NPL) during August 1990. After its listing on the NPL, the U.S. Army, United States Environmental Protection Agency (USEPA), and TCEQ (formerly known as Texas Water Commission) entered into an agreement under the Comprehensive Environmental Response Compensation, and Liability Act (CERCLA) Section 120 for remedial activities. The CERCLA Section 120 Agreement, referred to as the Federal Facility Agreement (FFA), became effective on December 30, 1991. Although there are many sites at LHAAP that are specifically NPL listed, LHAAP-35/36, of which WRSump002 is a part, is not considered an NPL site. Environmental activities at LHAAP-35/36 progressed through the site investigation, at which point it was agreed by the Army and the TCEQ, the lead regulatory agency, no significant releases had occurred and the site could be closed under Texas Administrative Code (TAC) Risk Reduction Rule Standard 2, no further action.

LHAAP-35/36 is a collection of 125 process sumps and 20 waste rack sumps found in multiple locations across the installation and predominantly associated with process areas. All of the production buildings had sumps that collected wash down water. Sumps were also associated with wash racks (waste rack sumps including WRSump002) where containers were cleaned and stored. Further information may be found in the

Notice of Registration No. 30990 files, which are available for inspection upon request at TCEQ, Central File Room Customer Service Center, Building E, 12100 Park 35 Circle, Austin, Texas, 78753, (512) 239-2900, Monday through Friday 8:00 a.m. to 5:00 p.m. or in the Administrative Record available at the Marshall Public Library, 300 S. Alamo Blvd, Marshall, Texas 75670, (903) 935-4465, Monday through Thursday 10:00 a.m. to 8 p.m., Friday and Saturday 10:00 a.m. to 5:30 p.m.

The TCEQ requires certain persons to provide recordation in the real property records to notify the public of the conditions of the land and/or the occurrence of remediation. This notification is not a representation or warranty by the TCEQ of the suitability of this land for any purpose.

## II

The WRSump002 parcel is 61.1 square feet, more or less, or 0.00140 acre tract located in Harrison County, Texas, near the town of Karnack, being more particularly described with survey plat and metes and bounds established in Exhibit A.

The United States Department of the Army has undertaken careful environmental study of the WRSump002 site and USEPA and TCEQ concluded that no further investigation or action is required. Contaminants in soil samples from WRSump002 meet non-residential soil criteria in accordance with 30TAC§335.560(b).

Limited monitoring of WRSump002 will take place in the form of Letters of Certification from the Army or the Transferee to TCEQ every five years to document that the use of WRSump002 is consistent with the non-residential use scenarios evaluated in the risk assessment. Future use of the parcel is intended as a national wildlife refuge consistent with industrial or recreational activities and not for residential purposes. For purposes of this certification, residential use includes, but is not limited to, single family or multi-family residences; child care facilities; nursing home or assisted living facilities; and any type of educational purpose for children/young adults in grades kindergarten through 12.

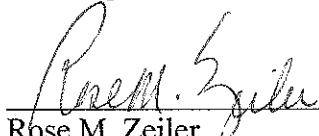
## III

The owner of the site is the Department of the Army, and its address where more specific information may be obtained is as follows:

ATTN: DAIM-ODB-LO (R. Zeiler)  
Post Office Box 220  
Ratcliff, AR 72951

or

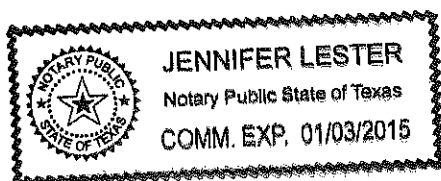
Assistant Chief of Staff for Installation Management  
ATTN: DAIM-ODB (T. Lederle)  
600 Army Pentagon  
Washington D.C. 20310-0600

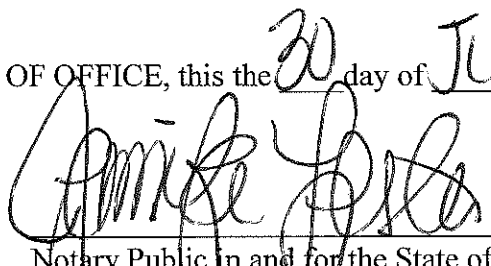
  
\_\_\_\_\_  
Rose M. Zeiler  
Longhorn AAP Site Manager

EXECUTED this the 30th day of June, 2011.

BEFORE ME, on this the 30th day of June, personally appeared Rose M. Zeiler, of the United States Army, United States Department of Defense, known to me to be the person and agent of said agency whose name is subscribed to the foregoing instrument, and she acknowledged to me that she executed the same for the purposes and in the capacity therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 30 day of June, 2011.



  
\_\_\_\_\_  
Notary Public in and for the State of Texas,  
County of Harrison

FIELD NOTES DESCRIPTION OF  
W.R. SUMP 002  
LONGHORN ARMY AMMUNITION PLANT  
HARRISON COUNTY, TEXAS

The herein described tract of land is located in Harrison County, Texas, near the town of Karnack, being 61.1 square feet of land out of the Longhorn Ordnance Works Reservation (also known as the Longhorn Army Ammunition Plant, Karnack, Texas), said tract being more particularly described as follows :

Surveyor's Note : All bearings and distances herein (unless labeled surface distance) are based on the Texas State Plane Coordinate System, North Central Zone, Code 4202, NAD 1983 (92). The scale factor applied equals 0.9998954238, and is based on surface traverse using electronic total station between type "G" Corps of Engineers monuments "TYLER-1" (N=6958507.460 feet E=3314279.499 feet) and "TYLER-2" (N=6957832.181 feet E=3315168.140 feet). Said traverse indicates a surface distance of 1116.219 feet between said monuments. The computed land area is based on surface distances.

Commencing at monument "TYLER-1" referenced above,

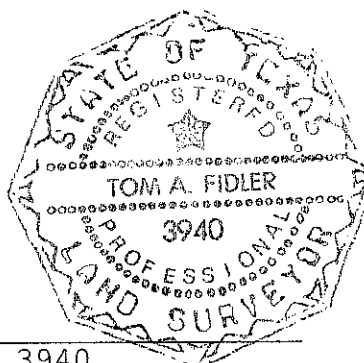
THENCE N 27deg03'19"E 797.78' to this POINT OF BEGINNING, said point being at the Southmost corner of the external face of the concrete wall which defines this sump,

THENCE along the external face of the concrete wall which defines this sump the following twelve courses, each course ending at a corner of the external face of said concrete wall :

(01)	N 50deg15'02"W	4.01',	being this sump's Westmost corner,
(02)	N 38deg19'51"E	7.83',	
(03)	S 58deg29'13"E	0.84',	
(04)	N 41deg11'11"E	3.09',	
(05)	N 51deg30'19"W	1.32',	
(06)	N 40deg19'40"E	4.55',	being this sump's Northmost corner,
(07)	S 54deg31'45"E	4.65',	being this sump's Eastmost corner,
(08)	S 38deg16'58"W	4.65',	
(09)	N 53deg12'50"W	1.23',	
(10)	S 39deg42'05"W	3.32',	
(11)	S 51deg04'42"E	0.79',	
(12)	S 38deg16'58"W	7.89',	being the aforementioned POINT OF BEGINNING.

This tract contains 61.1 square feet, more or less.

I, Tom A. Fidler, registered professional land surveyor No. 3940 in the State of Texas, do hereby certify that this field notes description is the result of a survey made on the ground and under my supervision.



Tom A. Fidler, R.P.L.S. Number 3940

NOTE

ALL BEARINGS, DISTANCES (UNLESS LABELED OTHERWISE), & COORDINATES ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, NORTH CENTRAL ZONE, CODE 4202, NAD 1983 (92). THE SCALE FACTOR APPLIED EQUALS 0.9998954238 & IS BASED ON SURFACE TRAVERSE BETWEEN STATIONS TYLER-1 & TYLER-2. THE COMPUTED LAND AREA IS BASED ON SURFACE DISTANCES.

NOTES:

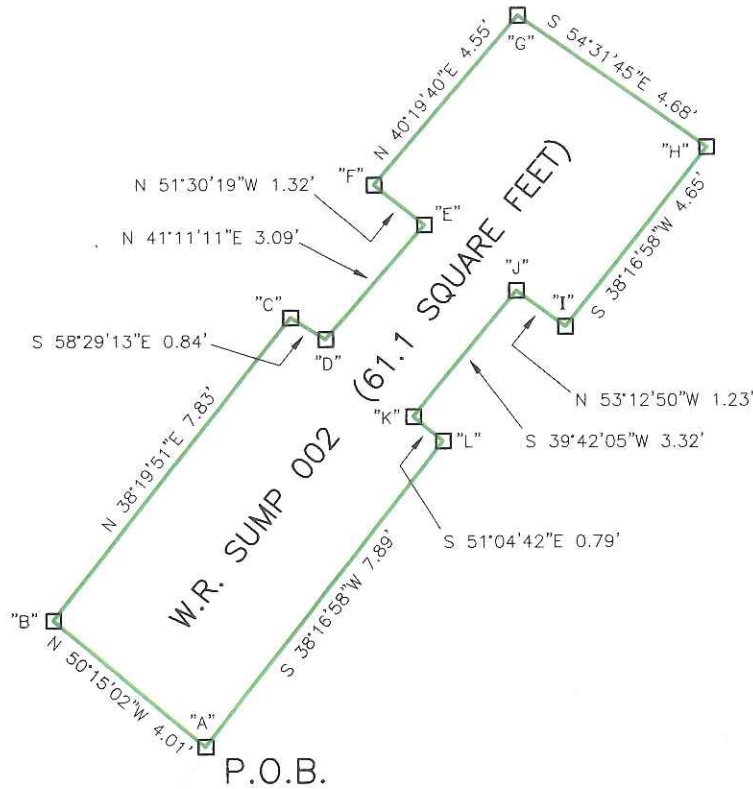
- ✕ INDICATES TYPE "G" CORPS OF ENGINEERS MONUMENT (FOUND)
- INDICATES CORNER OF EXTERNAL FACE OF CONCRETE WALL
- INDICATES UNMARKED POINT

I, Tom A. Fidler, registered professional land surveyor, No. 3940, do hereby certify that this plat reflects the location of the corners on the tract herein described, as surveyed on the ground and under my supervision in February & March 2011.

Witness my hand and seal March 1, 2011.

  
Tom A. Fidler, Registered Professional Land Surveyor, No. 3940





STATION TYLER-1  
STATE OF TEXAS  
NORTH CENTRAL ZONE  
N=6958507.460 FEET  
E=3314279.499 FEET

STATION TYLER-2  
STATE OF TEXAS  
NORTH CENTRAL ZONE  
N=6957832.181 FEET  
E=3315168.140 FEET

COORDINATE TABLE

POINT	NORTH	EAST
A	6959217.937	3314642.369
B	6959220.500	3314639.287
C	6959226.642	3314644.143
D	6959226.201	3314644.863
E	6959228.524	3314646.896
F	6959229.343	3314645.866
G	6959232.815	3314648.814
H	6959230.097	3314652.628
I	6959226.443	3314649.744
J	6959227.177	3314648.763
K	6959224.624	3314646.643
L	6959224.129	3314647.256
M	6959217.937	3314642.369

FIELD NOTES DESCRIPTION  
IS ON SEPARATE SHEETS

W.R. SUMP 002  
(61.1 SQUARE FEET)  
LONGHORN ARMY AMMUNITION PLANT  
HARRISON COUNTY, TEXAS

JOB #0407088	0407088.CRD	X.PTS	X.LEG
MAR. 1, 2011	0908074X.DWG		DRAWN BY JTJ

2012-000000721

\*\*\*DO NOT REMOVE THIS PAGE – IT IS A PART OF THIS INSTRUMENT\*\*\*

## MISCELLANEOUS

6 Pages

FILED AND RECORDED – OPR	CLERKS NOTES
On: <u>01/19/2012 10:41 AM</u>	
Document Number: <u>2012-000000721</u>	
Receipt No: <u>1200645</u>	
Amount: \$ <u>32.00</u>	
By: <u>Ann Turner</u> , Deputy	
<b>Patsy Cox, County Clerk Harrison County, Texas</b>	

STATE OF TEXAS  
COUNTY OF HARRISONI hereby certify that this instrument was filed on the date and time stamped hereon by me  
and was duly recorded in the Official Public Records of Harrison County, Texas.

Patsy Cox, Harrison County Clerk

Record and Return To:

SHAW ENVIRONMENTAL & INFRASTRUCTION GROUP  
1401 ENCLAVE PARKWAY, SUITE 250

HOUSTON, TX 77077

STATE OF TEXAS

HARRISON COUNTY

INDUSTRIAL SOLID WASTE  
NOTICE OF NONRESIDENTIAL LAND USE

KNOW ALL MEN BY THESE PRESENTS THAT:

Pursuant to the Rules of the Texas Commission on Environmental Quality (TCEQ) pertaining to Industrial Solid Waste Management, this document is hereby filed in the Public Records of Harrison County, Texas in compliance with the recordation requirements of said rules:

I

The U.S. Army, Department of Defense, has performed a remediation of the land described herein. WRSump003 (called W.R. Sump 003 on the attached Exhibit A) is part of LHAAP-35/36. WRSump003 is a former waste rack sump location near Building 16-Y physically located within site boundary of LHAAP-48 of the former Longhorn Army Ammunition Plant (LHAAP). LHAAP was placed on the National Priorities List (NPL) during August 1990. After its listing on the NPL, the U.S. Army, United States Environmental Protection Agency (USEPA), and TCEQ (formerly known as Texas Water Commission) entered into an agreement under the Comprehensive Environmental Response Compensation, and Liability Act (CERCLA) Section 120 for remedial activities. The CERCLA Section 120 Agreement, referred to as the Federal Facility Agreement (FFA), became effective on December 30, 1991. Although there are many sites at LHAAP that are specifically NPL listed, LHAAP-35/36, of which WRSump003 is a part, is not considered an NPL site. Environmental activities at LHAAP-35/36 progressed through the site investigation, at which point it was agreed by the Army and the TCEQ, the lead regulatory agency, no significant releases had occurred and the site could be closed under Texas Administrative Code (TAC) Risk Reduction Rule Standard 2, no further action.

LHAAP-35/36 is a collection of 125 process sumps and 20 waste rack sumps found in multiple locations across the installation and predominantly associated with process areas. All of the production buildings had sumps that collected wash down water. Sumps were also associated with wash racks (waste rack sumps including WRSump003) where containers were cleaned and stored. Further information may be found in the

Notice of Registration No. 30990 files, which are available for inspection upon request at TCEQ, Central File Room Customer Service Center, Building E, 12100 Park 35 Circle, Austin, Texas, 78753, (512) 239-2900, Monday through Friday 8:00 a.m. to 5:00 p.m. or in the Administrative Record available at the Marshall Public Library, 300 S. Alamo Blvd, Marshall, Texas 75670, (903) 935-4465, Monday through Thursday 10:00 a.m. to 8 p.m., Friday and Saturday 10:00 a.m. to 5:30 p.m.

The TCEQ requires certain persons to provide recordation in the real property records to notify the public of the conditions of the land and/or the occurrence of remediation. This notification is not a representation or warranty by the TCEQ of the suitability of this land for any purpose.

## II

The WRSump003 parcel is 69.5 square feet, more or less, or 0.00159 acre tract located in Harrison County, Texas, near the town of Karnack, being more particularly described with survey plat and metes and bounds established in Exhibit A.

The United States Department of the Army has undertaken careful environmental study of the WRSump003 site and USEPA and TCEQ concluded that no further investigation or action is required. Contaminants in soil samples from WRSump003 meet non-residential soil criteria in accordance with 30TAC§335.560(b).

Limited monitoring of WRSump003 will take place in the form of Letters of Certification from the Army or the Transferee to TCEQ every five years to document that the use of WRSump003 is consistent with the non-residential use scenarios evaluated in the risk assessment. Future use of the parcel is intended as a national wildlife refuge consistent with industrial or recreational activities and not for residential purposes. For purposes of this certification, residential use includes, but is not limited to, single family or multi-family residences; child care facilities; nursing home or assisted living facilities; and any type of educational purpose for children/young adults in grades kindergarten through 12.

## III

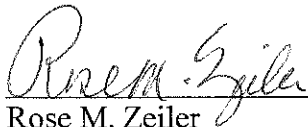
The owner of the site is the Department of the Army, and its address where more specific information may be obtained is as follows:

ATTN: DAIM-ODB-LO (R. Zeiler)  
Post Office Box 220  
Ratcliff, AR 72951

or



Assistant Chief of Staff for Installation Management  
ATTN: DAIM-ODB (T. Lederle)  
600 Army Pentagon  
Washington D.C. 20310-0600

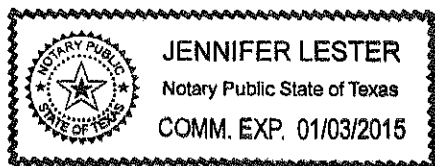


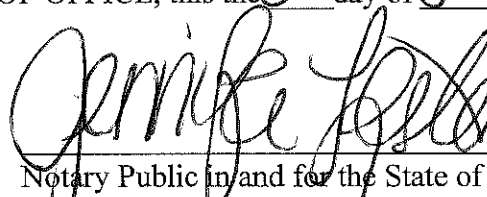
Rose M. Zeiler  
Longhorn AAP Site Manager

EXECUTED this the 30th day of June, 2011.

BEFORE ME, on this the 30th day of June, personally appeared Rose M. Zeiler, of the United States Army, United States Department of Defense, known to me to be the person and agent of said agency whose name is subscribed to the foregoing instrument, and she acknowledged to me that she executed the same for the purposes and in the capacity therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 30 day of June, 2011.





Notary Public in and for the State of Texas,  
County of Harrison

FIELD NOTES DESCRIPTION OF  
W.R. SUMP 003  
LONGHORN ARMY AMMUNITION PLANT  
HARRISON COUNTY, TEXAS

The herein described tract of land is located in Harrison County, Texas, near the town of Karnack, being 69.5 square feet of land out of the Longhorn Ordnance Works Reservation (also known as the Longhorn Army Ammunition Plant, Karnack, Texas), said tract being more particularly described as follows :

Surveyor's Note : All bearings and distances herein (unless labeled surface distance) are based on the Texas State Plane Coordinate System, North Central Zone, Code 4202, NAD 1983 (92). The scale factor applied equals 0.9998954238, and is based on surface traverse using electronic total station between type "G" Corps of Engineers monuments "TYLER-1" (N=6958507.460 feet E=3314279.499 feet) and "TYLER-2" (N=6957832.181 feet E=3315168.140 feet). Said traverse indicates a surface distance of 1116.219 feet between said monuments. The computed land area is based on surface distances.

Commencing at monument "TYLER-1" referenced above,

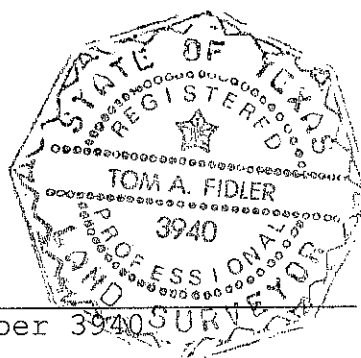
THENCE N 00deg06'48"W 643.61' to this POINT OF BEGINNING, said point being at the Southmost corner of the external face of the concrete wall which defines this sump,

THENCE along the external face of the concrete wall which defines this sump the following twelve courses, each course ending at a corner of the external face of said concrete wall :

- |      |                |        |  |
|------|----------------|--------|--|
| (01) | N 37deg49'35"W | 4.09'  | being this sump's Westmost corner,           |
| (02) | N 48deg49'52"E | 10.08' |  |
| (03) | S 40deg22'17"E | 0.96'  |  |
| (04) | N 51deg37'59"E | 1.64'  |  |
| (05) | N 32deg53'50"W | 1.27'  |  |
| (06) | N 49deg58'25"E | 4.65'  | being this sump's Northmost corner,          |
| (07) | S 41deg50'19"E | 4.65'  | being this sump's Eastmost corner,           |
| (08) | S 43deg56'08"W | 4.79'  |  |
| (09) | N 44deg10'19"W | 1.61'  |  |
| (10) | S 52deg56'11"W | 1.74'  |  |
| (11) | S 39deg31'31"E | 1.01'  |  |
| (12) | S 49deg33'58"W | 10.21' | being the aforementioned POINT OF BEGINNING. |

This tract contains 69.5 square feet, more or less.

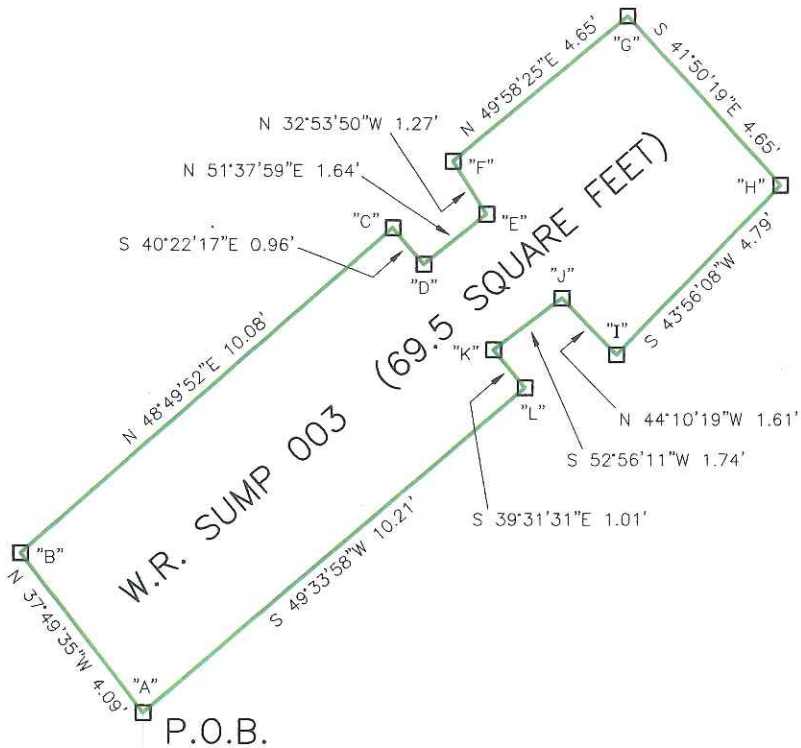
I, Tom A. Fidler, registered professional land surveyor No. 3940 in the State of Texas, do hereby certify that this field notes description is the result of a survey made on the ground and under my supervision.



Tom A. Fidler, R.P.L.S. Number 3940

NOTE

ALL BEARINGS, DISTANCES (UNLESS LABELED OTHERWISE), & COORDINATES ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, NORTH CENTRAL ZONE, CODE 4202, NAD 1983 (92). THE SCALE FACTOR APPLIED EQUALS 0.9998954238 & IS BASED ON SURFACE TRAVERSE BETWEEN STATIONS TYLER-1 & TYLER-2. THE COMPUTED LAND AREA IS BASED ON SURFACE DISTANCES.



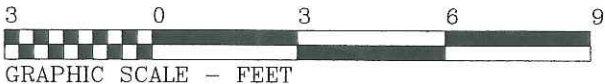
NOTES:

- X INDICATES TYPE "G" CORPS OF ENGINEERS MONUMENT (FOUND)
- INDICATES CORNER OF EXTERNAL FACE OF CONCRETE WALL
- INDICATES UNMARKED POINT

COORDINATE TABLE

POINT	NORTH	EAST
A	6959151.071	3314278.227
B	6959154.302	3314275.719
C	6959160.937	3314283.306
D	6959160.202	3314283.931
E	6959161.221	3314285.218
F	6959162.288	3314284.528
G	6959165.278	3314288.088
H	6959161.816	3314291.188
I	6959158.365	3314287.863
J	6959159.516	3314286.744
K	6959158.468	3314285.356
L	6959157.691	3314285.996

SCALE 1"=3'



I, Tom A. Fidler, registered professional land surveyor, No. 3940, do hereby certify that this plat reflects the location of the corners on the tract herein described, as surveyed on the ground and under my supervision in February & March 2011.

Witness my hand and seal March 1, 2011.

N 00°06'48"W 643.61'

STATION TYLER-1  
STATE OF TEXAS  
NORTH CENTRAL ZONE  
N=6958507.460 FEET  
E=3314279.499 FEET

BEARING SOURCE  
S 52°46'07.6"E 1116.102'  
(SURFACE TRAVERSE USING  
ELECTRONIC TOTAL STATION  
INDICATES 1116.219')

STATION TYLER-2  
STATE OF TEXAS  
NORTH CENTRAL ZONE  
N=6957832.181 FEET  
E=3315168.140 FEET

FIELD NOTES DESCRIPTION  
IS ON SEPARATE SHEETS

W.R. SUMP 003  
(69.5 SQUARE FEET)  
LONGHORN ARMY AMMUNITION PLANT  
HARRISON COUNTY, TEXAS

JOB #0407088	0407088.CRD	V.PTS V.LEG
MAR. 1, 2011	0908074V.DWG	DRAWN BY JTJ

Tom A. Fidler, Registered Professional Land Surveyor, No. 3940

**LONGHORN ARMY AMMUNITION PLANT**  
**Karnack, Texas**

***DRAFT MONTHLY MANAGERS' MEETING***

**AGENDA**

**DATE:** January 19, 2012  
**TIME:** 1:30 p.m.  
**PLACE:** Army Trailer, GWTP Compound, Longhorn Army Ammunition Plant  
 Call-in Number Courtesy of Shaw: 866-692-4538/2372062

**Welcome**

**RMZ**

**Action Items**

**Army**

- Conference call with EPA/TCEQ re LHAAP-29 Trigger for 5 Jan (*Completed*)
- Methylene Chloride Degradation
- Re-post link for ftp of LHAAP-18/24 sampling results
- Email EPA/TCEQ regarding status of IAP Work Plan review

**TCEQ**

- Review LHAAP-18/24 soil sampling results

**EPA**

- Review LHAAP-18/24 soil sampling results
- Methylene Chloride Degradation

**Shaw**

- EPA and TCEQ comments on Installation-wide work plan.

**Defense Environmental Restoration Program (DERP) PBC Update**

**KE**

- Document Status/Environmental Sites (Table)
- Groundwater Treatment Plant
- Path forward for ECO

**DERP Total Environmental Restoration Contract Update**

**Army**

- LHAAP-37 Well Installation
- Pilot Demonstration at LHAAP-37 Status
- Use of groundwater for mixing with nutrient

**MMRP Update**

**Army**

- Update IRP Metals Issue

**Programmatic Issues**

**RMZ/TZ/FD**

- Status of Dispute
- Notification to RAB

**USFWS Update**

**RMZ/PB**

- Environmental Restoration Issues with Transfer Schedule Impact
- USFWS Comments on Documents

**EPA – Non-CERCLA**

- Update on Phytoforensics Study
- Pesticides
- Asbestos related to Demolition Activities

TS

**Adjourn****ACRONYM LIST**

<b>DERP-</b>	<b>Defense Environmental Restoration Program</b>
<b>EPA-</b>	<b>Environmental Protection Agency</b>
<b>FS-</b>	<b>Feasibility Study</b>
<b>IRP-</b>	<b>Installation Restoration Program</b>
<b>ITS-</b>	<b>Intertek Testing Services</b>
<b>LHAAP-</b>	<b>Longhorn Army Ammunition Plant</b>
<b>MMRP-</b>	<b>Military Munitions Response Program</b>
<b>MNA-</b>	<b>Monitored Natural Attenuation</b>
<b>PB-</b>	<b>Paul Bruckwicki</b>
<b>PBC-</b>	<b>Performance Based Contract</b>
<b>PS-</b>	<b>Praveen Srivastav</b>
<b>QA-</b>	<b>Quality Assurance</b>
<b>QC-</b>	<b>Quality Control</b>
<b>RMZ-</b>	<b>Rose M. Zeiler</b>
<b>RD-</b>	<b>Remedial Design</b>
<b>ROD-</b>	<b>Record of Decision</b>
<b>SAP-</b>	<b>Sampling and Analysis Plan</b>
<b>TCEQ-</b>	<b>Texas Commission on Environmental Quality</b>
<b>USFWS-</b>	<b>United States Fish and Wildlife Service</b>




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**Subject:** **Draft Final Minutes, Monthly Managers Meeting,  
Longhorn Army Ammunition Plant (LHAAP)**

**Location of Meeting:** **Longhorn AAP Trailer**

**Date of Meeting:** **January 19, 2012; 01:30 PM – 4:14 PM**

---

**Meeting Participants:**

**BRAC:** Rose M. Zeiler, Tom Lederle  
**USACE-Tulsa:** Aaron Williams, John Lambert  
**Shaw:** Praveen Srivastav, Kay Everett  
**USEPA Region 6:** Steve Tzhone, Charles Faultry, Rich Mayer, Terry Burton  
**USGS:** Kent Becher, Bob Joseph  
**TCEQ:** Fay Duke, Dale Vodak  
**USFWS:** Paul Bruckwicki, Barry Forsythe

---

**Welcome**

**Rose M. Zeiler**

Attendees were introduced.

**Action Item Status**

**Army**

- Conference call with EPA/TCEQ re LHAAP-29 Trigger for 5 January (*Completed—A cost benefit curve was submitted.*)
- Determination of methylene chloride natural degradation trigger point for LHAAP-29.  
Pending
- Re-post link for ftp of LHAAP-18/24 sampling results (*Completed*)
- Email EPA/TCEQ regarding status of IAP Work Plan review (*TCEQ reviewing Site 18/24 results*)

**TCEQ**

- Review LHAAP-18/24 soil sampling results. Pending.

**EPA**

- Review LHAAP-18/24 soil sampling results. Pending.
- Determination of methylene chloride natural degradation trigger point for LHAAP-29.  
Pending.

**Shaw**

- Address EPA and TCEQ comments on Installation-wide work plan (WP). (*Provide regulatory comments to new contractor to update WP.*)

Re-posting of data from LHAAP-18/24 was completed. Discussion occurred on new data and the Feasibility Study (FS) for the site. Army indicated that the data has not been used in the FS yet. A criterion for soil sampling was to catch the sample beneath the interface (~10-13 feet bgs), at the highest PID reading, and at total depth, but not in identified fill material. New action: review logs

from the 18/24 sampling. There was no resolution regarding methylene chloride natural degradation trigger point for LHAAP-29.

The schedule for upcoming February sampling was discussed.

Rose indicated that a request for release of information under FOIA made by CLI as the TAG was received by the TAG in September 2011. Under Federal Acquisition Regulations, the information on the previous contract at LHAAP was released and questions were answered. Steve discussed DNT isomer issues regarding the lack of meaningful toxicity information as it relates to Longhorn and to Texas. John indicated that the Army may have some input into this issue.

Terry Burton said he would try to find some information on degradation of methylene chloride (MC) and look into what experience EPA may have on this issue and trigger value. He indicated that oxidation process was favored but that anaerobic pathway works too. A discussion followed on different results from dense non-aqueous phase liquid (DNAPL) sites.

Remedies in place (RIP) and operating properly and successfully (OPS) were discussed. Rose indicated that the OPS is a voluntary action by Army to facilitate transfer, not a statutory requirement. A performance period culminating in the 5-year review was discussed. Regulators indicated that a timeframe was needed for firming up the trigger value at LHAAP-29. It was further discussed that chromium could become an issue at LHAAP-29 as a result of oxidative treatment.

## **Defense Environmental Restoration Program (DERP) PBC Update**

**Praveen Srivastav**

### *Document Status/ Environmental Sites (Table)*

- LHAAP-03: The draft Engineering Evaluation/Cost Analysis (EE/CA) report is in regulatory review. TCEQ comments have been received. Steve indicated he would send EPA comments soon.
- LHAAP-04: Regulatory comments received. Response to comments (RTCs) was submitted to Army on 1/13/12 and regulators should probably receive them sometime next week.
- LHAAP-12 Remedial Action Operation [RA(O)] Years 1 and 2: RTCs submitted to regulators for review. TCEQ comments received; awaiting EPA comments. EPA indicated comments will be provided soon.
- LHAAP-12 RA(O) Years 3 and 4: Draft is in regulatory review as of 12/8/11. TCEQ comments received; awaiting EPA comments. EPA indicated comments will be provided

### *Groundwater Treatment Plant (GWTP)*

The GWTP is functioning normally. Typical maintenance activities conducted. The treated effluent water is being discharged to the burning ground (via sprinkler system) and injected in ICTs.

### *Path Forward for ECO*

The Ecological Revision and Evaluation for Explosives Compound Chemicals of Concern was sent to regulators and regulatory comments are expected in February. It was indicated by the Army that going forward the ecological (ECO) evaluation will be contracted to Shaw in a contract separate from the PBC. Barry noted that proposed sample location are different from the original ones and he stated that he didn't know if these locations were optimal replacements, since they were not collocated with original samples. He also had concerns with locations in low areas.

**DERP Total Environmental Restoration Contract Update****Army***LHAAP-37 Demonstration Project*

The contractor is planning to come out to LHAAP-37 next week, and the pilot demonstration is scheduled for the end of March. At present, they have not heard of any delay. Clarification was made that the use of groundwater will be used for mixing with nutrient and that the use in that manner is consistent with the LUC restricting use of groundwater to environmental testing and monitoring. The bioplug nutrient water is considered testing.

**MMRP Update****Army***Update IRP Metals Issue*

Army indicated a meeting to discuss this issue around the next monthly manager's meeting or the next Restoration Advisory Board (RAB) meeting. Steve said he was ready to discuss before March. The meeting would probably be a teleconference.

**Programmatic Issues***Status of Dispute*

Steve indicated that during the dispute resolution, details regarding the dispute do not have to be provided to the public. The comments made on the LHAAP-29 Record of Decision (ROD) are in discussions and have not been provided to the public as yet. It needs to be stated that these comments are in dispute resolution phase.

*Notification to RAB*

The Army indicated that notification to the RAB about the dispute is not required by the FFA.

**USFWS Update***Environmental Restoration Issues with Transfer Schedule Impact.*

Nothing was discussed.

*USFWS Comments on Documents.*

Nothing was discussed.

*Other*

Paul indicated that the bridge off of Avenue P at LHAAP-37 has been closed. He also indicated that an area scheduled to be burned this spring has an above-ground phone line.

**EPA – Non-CERCLA***Update on Phytoforensics Study*

EPA described their plan to conduct tree core sampling and asked if their decontamination water or purge water would be allowed to be disposed at the treatment plant. Army indicated that would be acceptable. Rich described the study that will be conducted and that they had marked the trees from which to collect the samples at LHAAP-16, and LHAAP-17. They would also be collecting groundwater samples from wells near the trees. Rose asked for a statement of the purpose of this activity and a map so she can comply with the NEPA requirement. A Record of Environmental Consideration and a Categorical Exclusion will be required. EPA indicated that they intend to begin sampling early to mid-April. They will have a work plan available in February.

*Pesticides/Asbestos related to Demolition Activities*

Steve asked for information regarding the method of asbestos removal during building demolition at Longhorn. Rose indicated that she believed a standard water suppression method was used. She also indicated that Longhorn was asked by EPA several years ago to participate in an alternative method (an alternative wet method) and had wanted to use one of the buildings, but determined that the



proper size building was not available. Regarding the other question on pesticides, EPA headquarters asked if investigation and remediation on buildings were inspected on non-NPL sites.

Kent indicated that EPA conducted split sampling recently and provided that the relative per cent criteria matched up overall. He emphasized that his observation of all contractor sampling procedures were carried out in an appropriate manner and sampling results were consistent and comparable.

### **Meeting Adjourned**

Next meeting is scheduled for February 21, 2012 at 10:00 AM – Tuesday.

### **Action Items**

#### **Army**

- Review LHAAP-18/24 logs from recent soil sampling.

#### **TCEQ and EPA**

- Review LHAAP-18/24 logs from soil sampling.

#### **Shaw**

- Provide monitoring well coordinates from LHAAP-16 and -17 to EPA.

Location	LHAAP ARMY TRAILER		Teleconference
Date	19-Jan-2012	Time	1:30 PM - 4:15 PM

[illegible]



**Status of Sites and Technical Documents  
Longhorn Army Ammunition Plant – PBC Contract  
January 19, 2012**

No.	Document in Progress	Submittal Date	Army	Regulator	Next Submittal	Expected Date	Army	Regulator	Comment Resolution	Status	Remarks
1	Preliminary Draft EE/CA, LHAAP-03	9/29/11	x		Final	2/15/11	x	x		Army comments received 12/6/11. Submitted revised document. In Army's review	
2	Draft Feasibility Study, LHAAP-04	11/03/11	x	x	Final	2/15/11	x	x		Regulatory comments received. RTCs submitted to Army on 1/13/12	
3	Draft LHAAP-12 RAO Report – Year 1 & 2	2/10/11	x	x	Final	2/15/12	x	x	continuing	Received TCEQ comments. Waiting on EPA comments.	
4	Draft LHAAP-12 RAO Report – Year 3 & 4	12/8/11	x	x	Final	2/15/12	x	x	continuing	Received TCEQ comments. Waiting on EPA comments.	

**Perchlorate Results for Creek Sampling**  
**Longhorn Army Ammunition Plant, Karnack, Texas**

Creek Sample ID	GW-Res	Mar 2008	Jun 2008	Sep 2008	Dec 2008	May 2009	July 2009	Aug 2009	Sep 2009	Dec 2009	Mar 2010	Jun 2010	Sep 2010	Dec 2010	Mar 2011	Jun 2011	Sep 2011	Dec 2011
GPW-1	26	27	0.5U	0.5U	0.22U	16	4U	NS	1.2U	3.7	1.3J	0.6U	dry	0.1U	8.7	dry	dry	1.76
GPW-3	26	21.9	9.42	1.1	0.22U	8.9	4U	NS	0.6U	2.8	1.8J	0.6U	dry	0.199J	0.673	dry	dry	1.31
HBW-1	26	0.5U	0.5U	0.5U	0.22U	0.55U	4U	NS	1.5U	0.275U	1.5U	0.6U	dry	0.1U	0.2U	dry	dry	0.1U
HBW-7	26	0.5U	0.5U	0.5U	0.22U	0.55U	4U	24*	1.2U	0.275U	1.5U	0.6U	dry	0.1U	0.2U	dry	dry	0.171J
HBW-10	26	0.5U	0.5U	0.5U	0.22U	0.55U	4U	NS	1.5U	0.275U	1.2U	0.6U	dry	0.1U	0.2U	dry	dry	0.1U

**NOTES:**

all units in micrograms/liter (µg/L)

\* One sample taken during GWTP shutdown

U undetected

J approximate value present below normal reporting limit

GW-Res groundwater medium-specific concentration for residential use

NS not sampled

GP is Goose Prairie Creek

HB is Harrison Bayou

W is surface water

**Creek Conditions for last six sampling events:**

September 2010 conditions: All creek sampling locations were dry in September.

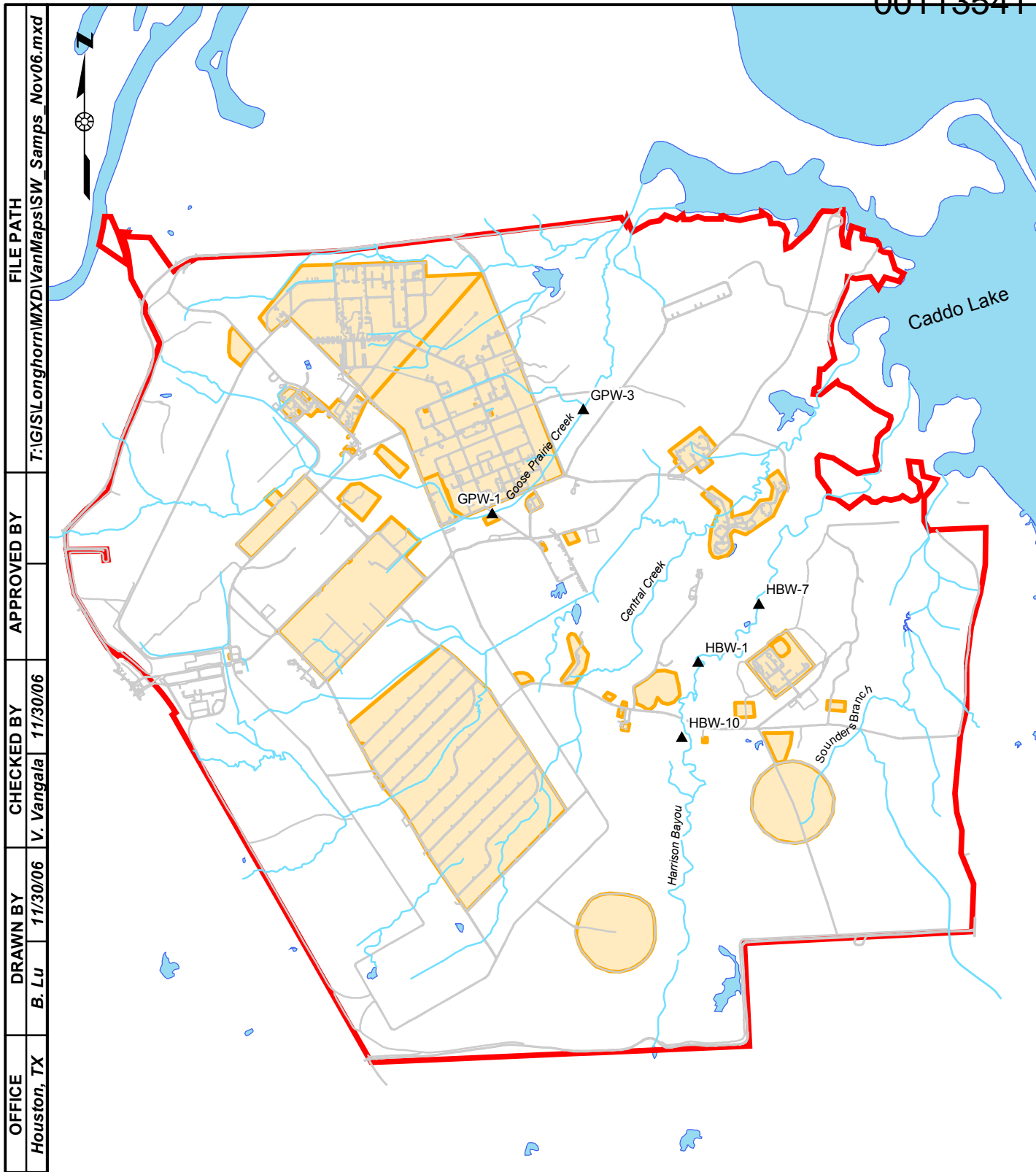
December 2010 conditions: GP sampling locations some water but no visible flow; HB sampling locations plenty of water volume but very little flow

March 2011 conditions: GP sampling locations slow flow; HB sampling locations fairly good flow

June 2011 conditions: All creek sampling locations were dry in June.

September 2011 conditions: All creek sampling locations were dry in September.

December 2011 conditions: Small amount of flow at Harrison Bayou locations and no visible flow at Goose Prairie Creek locations.



OFFICE	DRAWN BY	CHECKED BY	APPROVED BY	FILE PATH
Houston, TX	B. Lu	V. Vangala	11/30/06	T:\GIS\Longhorn\MXD\VanMaps\SW_Samps_Nov06.mxd

Plot Date: 11/06

### Legend

- ▲ Surface Water Sampling Location
- Stream
- Road
- Site
- Lake



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

FIGURE 1

### SURFACE WATER SAMPLING LOCATION

LONGHORN ARMY AMMUNITION PLANT  
KARNACK, TEXAS

Master Groundwater Sampling Schedule  
Longhorn Army Ammunition Plant  
Updated: 01/15/12

				2011												2012											
		Last Date Sampled	Next Event*	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
LHAAP-12																											
12MW20	on site - near well 24	6/7/11	Jun-12						VOCs												VOCs						
12WW21	on site - downgradient	6/7/11	Jun-12						VOCs												VOCs						
12WW22	compliance northeast	6/7/11	Jun-12						VOCs												VOCs						
12WW23	compliance - northwest	6/7/11	Jun-12						VOCs												VOCs						
12WW24	on site - near source	6/7/11	Jun-12						VOCs												VOCs						
LHAAP-16 (Interim Action)																											
EW-01	NE, annual	2/16/11	Feb-12		VOCs,P												VOCs,P										
EW-02	NE, annual	2/16/11	Feb-12		VOCs,P												VOCs,P										
EW-03	NE, annual	2/16/11	Feb-12		VOCs,P												VOCs,P										
EW-04	NE, annual	2/16/11	Feb-12		VOCs,P												VOCs,P										
EW-05	NE, annual	2/16/11	Feb-12		VOCs,P												VOCs,P										
EW-06	NE, annual	2/16/11	Feb-12		VOCs,P												VOCs,P										
EW-07	NE, annual	2/16/11	Feb-12		VOCs,P												VOCs,P										
EW-08	NE, annual	2/16/11	Feb-12		VOCs,P												VOCs,P										
LHAAP-17																											
TBD																											
LHAAP-18/24 (Inteirm Action)																											
ICT-2	west, annual	2/21/11	Feb-12		VOCs,Cl,P												VOCs,Cl,P										
ICT-4	SW, annual	2/21/11	Feb-12		VOCs,Cl,P												VOCs,Cl,P										
ICT-7	north, annual	2/21/11	Feb-12		VOCs,Cl,P												VOCs,Cl,P										
ICT-8	east, annual	2/21/11	Feb-12		VOCs,Cl,P												VOCs,Cl,P										
ICT-11	south, annual	2/21/11	Feb-12		VOCs,Cl,P												VOCs,Cl,P										
ICT-12B	SW, annual	2/21/11	Feb-12		VOCs,Cl,P												VOCs,Cl,P										
ICT-12C	SW, annual	2/21/11	Feb-12		VOCs,Cl,P												VOCs,Cl,P										
ICT-12D	SW, annual	2/21/11	Feb-12		VOCs,Cl,P												VOCs,Cl,P										
ICT-12C	SW, annual	2/21/11	Feb-12		VOCs,Cl,P												VOCs,Cl,P										
ICT-12E	SW, annual	2/21/11	Feb-12		VOCs,Cl,P												VOCs,Cl,P										
EW-01	annual	2/21/11	Feb-12		VOCs,Cl,P												VOCs,Cl,P										
ICT-13A	west, annual	2/21/11	Feb-12		VOCs,Cl,P												VOCs,Cl,P										
ICT-13B	NW, annual	2/21/11	Feb-12		VOCs,Cl,P												VOCs,Cl,P										
ICT-13D	NW, annual	2/21/11	Feb-12		VOCs,Cl,P												VOCs,Cl,P										
ICT-13E	north, annual	2/21/11	Feb-12		VOCs,Cl,P												VOCs,Cl,P										
ICT-13F	north, annual	2/21/11	Feb-12		VOCs,Cl,P												VOCs,Cl,P										
ICT-14B	NE, annual	2/21/11	Feb-12		VOCs,Cl,P												VOCs,Cl,P										
ICT-14C	NE, annual	2/21/11	Feb-12		VOCs,Cl,P												VOCs,Cl,P										
ICT-14D	NE, annual	2/21/11	Feb-12		VOCs,Cl,P												VOCs,Cl,P										
18WW07	north	11/10/05	SAN																								
18WW08	north, semi-annual	09/15/11	Mar-12			VOCs,Cl,P,TM						VOCs,Cl,P,TM					VOCs,Cl,P,TM						VOCs,Cl,P,TM				
18WW09	north, semi-annual	09/15/11	Mar-12			VOCs,Cl,P,TM						VOCs,Cl,P,TM					VOCs,Cl,P,TM						VOCs,Cl,P,TM				
18WW10	west, semi-annual	09/14/11	Mar-12			VOCs,Cl,P,TM						VOCs,Cl,P,TM					VOCs,Cl,P,TM						VOCs,Cl,P,TM				
18WW11	west, semi-annual	3/16/11	Mar-12																								
18WW17	east	11/17/05	SAN																								
18WW20	north, semi-annual	09/14/11	Mar-12			VOCs,Cl,P,TM						VOCs,Cl,P,TM					VOCs,Cl,P,TM						VOCs,Cl,P,TM				
18WW21	NE	11/10/05	SAN																								
C-01	south	11/10/05	SAN																								
C-02	NW, semi-annual	3/17/11	Mar-12																								
C-04	NE, semi-annual	09/12/11	Mar-12			VOCs,Cl,P,TM						VOCs,Cl,P,TM					VOCs,Cl,P,TM						VOCs,Cl,P,TM				
C-04A	SAN	5/11/06	SAN																								
C8	east, semi-annual	09/12/11	Mar-12			VOCs,Cl,P,TM						VOCs,Cl,P,TM					VOCs,Cl,P,TM						VOCs,Cl,P,TM				
MW-1	inside CT perimeter	5/11/06	SAN																								
MW-2	inside CT perimeter, semi-annual	9/21/11	Mar-12			VOCs,Cl,P,TM						VOCs,Cl,P,TM					VOCs,Cl,P,TM						VOCs,Cl,P,TM				
MW-3	inside CT perimeter	5/11/06	SAN																								
MW-4	inside CT perimeter	5/11/06	SAN																								
MW-6	inside CT perimeter	5/11/06	SAN																								
MW-9	inside CT perimeter	5/11/06	SAN			VOCs,Cl,P,TM						VOCs,Cl,P,TM					VOCs,Cl,P,TM						VOCs,Cl,P,TM				
AWD1	west along CT	9/13/11	SAN			VOCs,Cl,P,TM						VOCs,Cl,P,TM					VOCs,Cl,P,TM						VOCs,Cl,P,TM				
AWD3	inside CT perimeter	9/13/11	SAN			VOCs,Cl,P,TM						VOCs,Cl,P,TM					VOCs,Cl,P,TM						VOCs,Cl,P,TM				
AWD2	inside CT perimeter	5/11/06	SAN																								
AWD4	north	9/13/11	SAN																								
MW-5	inside CT perimeter	5/11/06	SAN																								
MW-7	inside CT perimeter	9/20/11	SAN			VOCs,Cl,P,TM																					

Master Groundwater Sampling Schedule  
Longhorn Army Ammunition Plant

Updated: 01/15/12

				2011												2012											
		Last Date Sampled	Next Event*	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Site/Well ID	Well description																										
MW-129	west, along CT	9/21/11	SAN																								
C9	south, semi-annual	3/14/11	Mar-12																								
C-10	south	5/11/06	SAN																								
C6	2100 ft north of site, semi-annual	9/12/11	Mar-12			VOCs,Cl,P,TM						VOCs,Cl,P,TM						VOCs,Cl,P,TM					VOCs,Cl,P,TM				
C3	east, semi-annual	9/12/11	Mar-12			VOCs,Cl,P,TM						VOCs,Cl,P,TM						VOCs,Cl,P,TM					VOCs,Cl,P,TM				
LHAAP-29																											
TBD																											
LHAAP-37																											
TBD																											
LHAAP-46																											
TBD																											
LHAAP-47																											
TBD																											
LHAAP-50																											
TBD																											
LHAAP-35A(58)																											
TBD																											
Creek Sampling (LHAAP-47/50)																											
TBD																											
Perimeter Well Sampling																											
108		9/28/11	Sep-12									P											P				
110		9/11-dry	Sep-12									P											P				
111		9/11-dry	Sep-12									P											P				
112		9/28/11	Sep-12									P											P				
133		9/28/11	Mar-12			P						P						P					P				
134		9/28/11	Mar-12			P						P						P					P				
Ongoing Creek Sampling (Harrison Bayou & Goose Prairie Creek)																											
HBW-1	Harrison Bayou Water	12/14/11	Mar-12			P			P			P			P			P			P		P			P	
HBW-7	Harrison Bayou Water	12/14/11	Mar-12			P			P			P			P			P			P		P			P	
HBW-10	Harrison Bayou Water	12/14/11	Mar-12			P			P			P			P			P			P		P			P	
GPW-1	Goose Prairie Creek Water	12/14/11	Mar-12			P			P			P			P			P			P		P			P	
GPW-3	Goose Prairie Creek Water	12/14/11	Mar-12			P			P			P			P			P			P		P			P	

**Notes & abbreviations:**  
\* - Two weeks prior to next sampling event, TCEQ & EPA will be notified of the tentative date. If TCEQ or EPA would like to be onsite, a couple of days priot to sampling, TCEQ & EPA will contacted with a more firm date & time.  
TBD - to be determined after remedial design of final remedy  
EW- Extraction well  
ICT- Interceptor collection trench  
NE- northwest  
NW- northwest  
SW- southwest  
CT- Collection trench  
SAN- Sample as needed  
MNA - MNA parameters (see list below)  
VOC - volatile organic compounds (Method 8260)  
TM- TM  
P- Perchlorate  
SVOCs

MNA parameters:  
nitrates  
nitrites  
sulfates  
pH  
Eh (redox potential)  
conductivity  
temperature  
dissolved oxygen (DO)  
ferrous iron (HACH meter in field)  
Cl- Chloride  
methane  
ethane  
ethene  
inorganic & organic carbon  
Dehalococcolides



LONGHORN ARMY AMMUNITION PLANT  
RESTORATION ADVISORY BOARD  
Karnack, Texas  
(479) 635-0110

January 5, 2012

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LONGHORN ARMY AMMUNITION PLANT  
RESTORATION ADVISORY BOARD  
Karnack, Texas  
(479) 635-0110

January 5, 2012, page 2

Dear LHAAP RAB Member,

The next Restoration Advisory Board (RAB) meeting will be held on Thursday, January 19, 2012, from 6:30 to 8:00 p.m. at the Karnack Community Center, Karnack, Texas. We hope that you can attend. If you have any questions, please do not hesitate to contact me.

Shaw Environmental, Inc. (Shaw) is the contractor supporting the U.S. Army environmental restoration activities at the Longhorn Army Ammunition Plant (LHAAP), and will be coordinating the RAB meeting. A tentative agenda for the meeting is attached. If you have additional items for the agenda, please provide to me at [rose.zeiler@us.army.mil](mailto:rose.zeiler@us.army.mil).

Regards,

Dr. Rose Zeiler  
Department of the Army  
Longhorn Army Ammunition Plant  
Box 220  
Ratcliff, Arkansas 72951

Copy to:  
Dawn Orsack, Rick Lowerre; CLI (TAG)  
Janetta Coats, Donn Walters; EPA (TAG)



LONGHORN ARMY AMMUNITION PLANT  
RESTORATION ADVISORY BOARD  
Karnack, Texas  
(479) 635-0110

## AGENDA

**DATE:** Thursday, January 19, 2012  
**TIME:** 6:30 – 8:00 PM  
**PLACE:** Karnack Community Center, Karnack, Texas

- 06:30** Welcome and Introduction
- 06:35** Open items {RMZ}  
Charter Revision Discussion  
RAB Question and Answer - AEC  
Election of Co-Chair Discussion
- 07:05** Defense Environmental Restoration Program (DERP) Performance Based Contract (PBC) Update {Shaw}  
-Documents Status/ Environmental Sites  
-Groundwater Treatment Plant (GWTP) Update  
-Perimeter Well/Surface Water Sampling (Creek) Results and Update
- 07:25** Other DERP Environmental Restoration Update {RMZ}  
-LHAAP-35B(37) and LHAAP-67 RD
- 07:30** Military Munitions Response Program (MMRP) {USACE}
- 07:35** Other Environmental Restoration Issues {RMZ}  
DNT Isomers at Longhorn
- 07:50** Look Ahead at the Schedule
- 08:00** Adjourn {RMZ}




---

**Subject:** **Draft Final Minutes, Quarterly Restoration Advisory Board (RAB) Meeting, Longhorn Army Ammunition Plant (LHAAP)**

**Location of Meeting:** **Karnack Community Center, Karnack, Texas**

**Date of Meeting:** **January 19, 2012, 6:30 – 08:00 PM**

---

**Meeting Participants:**

**LHAAP/BRAC:** Rose M. Zeiler, Tom Lederle  
**USACE:** John Lambert, Aaron Williams  
**USAEC:** Cathy Kropp  
**Shaw Environmental:** Praveen Srivastav, Kay Everett  
**TCEQ:** Fay Duke  
**USEPA Region 6:** Steve Tzhone, Charles Faultry, Rich Mayer, Terry Burton  
**USGS:** Kent Becher, Bob Joseph  
**RAB:** **Present:** Paul Fortune, Ken Burkhalter, Carol Fortune, Lee Guice, Judith Johnson, Ted Kurz, Richard LeTourneau, Nigel Shivers, Judy Van Deventer, Tom Walker  
**Absent:** Robert Cargill, Charles Dixon, Jim Lambright, E.V. Wilson, Pickens Winters

**Public:** Daren Horton, Robert Speight, Bill Stephenson, Jonna Fitzgerald, Jeff Thompson (Harrison Co. Commissioner), Dawn Orsak (CLI - TAG), Kathryn Burger (CLI), Glenn Evans (Longview News-Journal), Hugh Taylor (Harrison Co. Judge), Jamie Fortune, Patrick Fortune

---

An agenda for the RAB meeting was distributed prior to the meeting. Paul Fortune called the meeting to order.

**Welcome – Rose Zeiler**

Tom Lederle and Bob Joseph were introduced.

**Open Items – Rose Zeiler***Charter Revision Discussion*

The RAB charter is needed to be revised to bring it into alignment with current RAB rules. The intent was to have it finished tonight.

*RAB Question and Answer - AEC*

If there are additional comments, please get them to Cathy Kropp and she will consolidate them. She will send the draft in the mail or the RAB could get together and discuss in order to develop the second draft.

*Co-Chair Elections*

It was suggested that the co-chair elections be removed from the agenda until the charter is approved.

**Defense Environmental Restoration Program (DERP) Performance Based Contract (PBC) Update–Shaw***Document Status/Environmental Sites*

Copies of the document status table were distributed and Praveen Srivastav discussed each site.

- LHAAP-03: This document is in regulator review.
- LHAAP-04: Regulatory comments received and response to comments has been submitted to Army on 1/13/12.
- LHAAP-12 RA(O): Years 1 and 2 RA(O) report and Years 3 and 4 are in comment resolution phase.

*Groundwater Treatment Plant (GWTP) Update*

The GWTP operated normally during the past quarter. No major issues to report. The creeks have been dry and, therefore, effluent water is being injected at site LHAAP-18/24 and also sprinkled. The purpose of the INF pond is used as temporary storage when needed. Sprinkling occurs when discharge into the creek is not possible because of lack of flow.

*Perimeter Well/Surface Water Sampling (Creek) Results and Update*

The creeks were dry during the September sampling event; however, samples were collected during the December event and are provided. Results from five locations were below the TCEQ GW-RES for perchlorate. The next perimeter well semiannual sampling event is scheduled for March along with the quarterly creek monitoring event.

**DERP Total Environmental Restoration Contract (TERC) Update – Rose Zeiler***LHAAP-35B(37) and LHAAP-67 RD*

The LHAAP-35B(37) and LHAAP-67 Remedial Design document is available at the Marshall Public Library. Aaron Williams provided a presentation on these two sites. The selected remedy for both sites is Monitored Natural Attenuation (MNA) and Land Use Controls. At LHAAP-37 the monitoring network will consist of 6 wells within the plume to evaluate MNA

and 9 wells that are located outside the plume to ensure contaminated groundwater does not migrate to surface water at unacceptable levels and to confirm plume limits and 2 surface water sampling locations. There will be some additional wells installed at LHAAP-37. Because a bioplug study will be conducted for 2 years at LHAAP-37, natural attenuation will be monitored after the bioplug study.

At LHAAP-67 the monitoring network will consist of 3 wells within the plume to ensure contaminated groundwater does not migrate to surface water at unacceptable levels and to confirm plume limits and 10 wells that are located outside the plume to ensure contaminated groundwater does not migrate to surface water at unacceptable levels and to confirm plume limits and 2 surface water sampling locations. There will be some additional wells installed at LHAAP-67

### **Military Munitions Response Program (MMRP) Update – USACE**

There is nothing new to discuss.

### **Other Environmental Restoration Issues/Concerns**

#### ***DNT Isomer at Longhorn***

Steve Tzhone introduced the EPA team that included Charles Faultry, Terry Burton and Rich Mayer, Barry Forsythe (Fish and Wildlife liaison), and the USGS team that supports EPA and includes Kent Becher (USGS) and Bob Joseph (USGS).

Steve discussed the isomer issue and the fact that there is not a reliable method to analyze samples. Wisconsin may have a policy in place to address all 6 isomers; however, Texas does not have a regulatory mandate. When a method or regulatory mandate becomes available, Steve will provide. EPA is currently working on this.

Rich Mayer talked about the tree core project the EPA is performing at Longhorn AAP. The research will explore relationship between groundwater results and the tree cores, and may lend information on absorption factor which varies by the type of tree. This is a pilot project researching the uptake of perchlorate.

Kent discussed the recent split sampling schedule with sampling at the installation. He indicated that he observed sampling techniques and conducted a quality control review of the sampling results received after split sampling. Kent indicated that all sampling techniques observed were conducted in accordance with standard industry state and federal procedures and that quality control criteria were met in comparing sampling data.

#### **Look Ahead at the Schedule**

EPA plans to split samples at LHAAP-18/24, LHAAP-12, LHAAP-16, and creek sampling coming up in March.

***Adjourn*****January Meeting Attachments and Handouts:**

- *Status of Technical Documents PBC*
- *Meeting Agenda*
- *Surface Water Sampling Results and location map*
- *LHAAP-35B(37) and LHAAP-67*
- *EPA Presentations*
- *Look Ahead*

***Acronyms***

<i>DERP</i>	Defense Environment Response Program
<i>EE/CA</i>	Engineering Evaluation/Cost Analysis
<i>FS</i>	Feasibility Study
<i>GWTP</i>	Groundwater Treatment Plant
<i>MMRP</i>	military munitions response program
<i>PBC</i>	Performance Based Contract
<i>RA(O)</i>	Remedial Action Operations
<i>RD</i>	Remedial Design
<i>RFI</i>	Request for Information
<i>ROD</i>	Record of Decision
<i>USGS</i>	United States Geological Survey



Shaw Environmental, Inc.

# Longhorn Army Ammunition Plant Restoration Advisory Board Meeting



<b>Location</b>	Karnack Community Center		
<b>Date</b>	19-Jan-2012	6:30 PM	page 1 of 2

Please sign in the space provided or add your name and address on next page if your name does not appear below.

## ATTENDEES

Name (printed)	Signature	Organization	Phone	E-mail
<b>RAB Members</b>				
Paul Fortune	<i>Paul Fortune</i>	RAB Co-Chair		<a href="mailto:plfortune@hotmail.com">plfortune@hotmail.com</a>
Ken Burkhalter	<i>Ken Burkhalter</i>	RAB Board Member		<a href="mailto:kburkhalter@shreve.net">kburkhalter@shreve.net</a>
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Tom Walker	<i>Tom Walker</i>	RAB Board Member		<a href="mailto:twalkercaddolake@gmail.com">twalkercaddolake@gmail.com</a>
E. V. Wilson		RAB Board Member		<a href="mailto:eww1@valornet.com">eww1@valornet.com</a>
Pickens Winters		RAB Board Member		NA
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Fay Duke	<i>Fay Duke</i>	TCEQ, Austin	(512) 239-2443	<a href="mailto:fduke@tceq.state.tx.us">fduke@tceq.state.tx.us</a>
Dale Vodak		TCEQ	(903) 535-5147	<a href="mailto:dvodak@tceq.state.tx.us">dvodak@tceq.state.tx.us</a>
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Barry Forsythe	<i>Barry Forsythe</i>	USFSW	(214) 665-8467	<a href="mailto:forsythe.barry@epa.gov">forsythe.barry@epa.gov</a>
Mark Williams		USFSW	(903) 679-9144	<a href="mailto:mark_williams@fws.gov">mark_williams@fws.gov</a>
Praveen Srivastav	<i>Praveen Srivastav</i>	SHAW	(281) 531-3188	<a href="mailto:praveen.srivastav@shawgrp.com">praveen.srivastav@shawgrp.com</a>
Kay Everett	<i>Kay Everett</i>	SHAW	(281) 531-3121	<a href="mailto:kay.everett@shawgrp.com">kay.everett@shawgrp.com</a>
Rich Mayer	<i>Rich Mayer</i>	USEPA	214-165-7442	<a href="mailto:mayer.richard@epa.gov">mayer.richard@epa.gov</a>





Shaw Environmental, Inc.

## Longhorn Army Ammunition Plant Restoration Advisory Board Meeting



Location	Karnack Community Center		
Date	19-Jan-2012	6:30 PM	page 2 of 2

Please provide your address for future mailings or information.

## ATTENDEES

Please print legibly.

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**Status of Sites and Technical Documents  
Longhorn Army Ammunition Plant – PBC Contract  
January 19, 2012**

No.	Document in Progress	Submittal Date	Army	Regulator	Next Submittal	Expected Date	Army	Regulator	Comment Resolution	Status	Remarks
1	Preliminary Draft EE/CA, LHAAP-03	9/29/11	x		Final	2/15/11	x	x		Army comments received 12/6/11. Submitted revised document. In Army's review	
2	Draft Feasibility Study, LHAAP-04	11/03/11	x	x	Final	2/15/11	x	x		Regulatory comments received. RTCs submitted to Army on 1/13/12	
3	Draft LHAAP-12 RAO Report – Year 1 & 2	2/10/11	x	x	Final	2/15/12	x	x	continuing	Received TCEQ comments. Waiting on EPA comments.	
4	Draft LHAAP-12 RAO Report – Year 3 & 4	12/8/11	x	x	Final	2/15/12	x	x	continuing	Received TCEQ comments. Waiting on EPA comments.	

Master Groundwater Sampling Schedule  
Longhorn Army Ammunition Plant  
Updated: 01/15/12

				2011												2012											
		Last Date Sampled	Next Event*	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
LHAAP-12																											
12MW20	on site - near well 24	6/7/11	Jun-12						VOCs												VOCs						
12WW21	on site - downgradient	6/7/11	Jun-12						VOCs												VOCs						
12WW22	compliance northeast	6/7/11	Jun-12						VOCs												VOCs						
12WW23	compliance - northwest	6/7/11	Jun-12						VOCs												VOCs						
12WW24	on site - near source	6/7/11	Jun-12						VOCs												VOCs						
LHAAP-16 (Interim Action)																											
EW-01	NE, annual	2/16/11	Feb-12		VOCs,P												VOCs,P										
EW-02	NE, annual	2/16/11	Feb-12		VOCs,P												VOCs,P										
EW-03	NE, annual	2/16/11	Feb-12		VOCs,P												VOCs,P										
EW-04	NE, annual	2/16/11	Feb-12		VOCs,P												VOCs,P										
EW-05	NE, annual	2/16/11	Feb-12		VOCs,P												VOCs,P										
EW-06	NE, annual	2/16/11	Feb-12		VOCs,P												VOCs,P										
EW-07	NE, annual	2/16/11	Feb-12		VOCs,P												VOCs,P										
EW-08	NE, annual	2/16/11	Feb-12		VOCs,P												VOCs,P										
LHAAP-17																											
TBD																											
LHAAP-18/24 (Inteirm Action)																											
ICT-2	west, annual	2/21/11	Feb-12		VOCs,Cl,P												VOCs,Cl,P										
ICT-4	SW, annual	2/21/11	Feb-12		VOCs,Cl,P												VOCs,Cl,P										
ICT-7	north, annual	2/21/11	Feb-12		VOCs,Cl,P												VOCs,Cl,P										
ICT-8	east, annual	2/21/11	Feb-12		VOCs,Cl,P												VOCs,Cl,P										
ICT-11	south, annual	2/21/11	Feb-12		VOCs,Cl,P												VOCs,Cl,P										
ICT-12B	SW, annual	2/21/11	Feb-12		VOCs,Cl,P												VOCs,Cl,P										
ICT-12C	SW, annual	2/21/11	Feb-12		VOCs,Cl,P												VOCs,Cl,P										
ICT-12D	SW, annual	2/21/11	Feb-12		VOCs,Cl,P												VOCs,Cl,P										
ICT-12C	SW, annual	2/21/11	Feb-12		VOCs,Cl,P												VOCs,Cl,P										
ICT-12E	SW, annual	2/21/11	Feb-12		VOCs,Cl,P												VOCs,Cl,P										
EW-01	annual	2/21/11	Feb-12		VOCs,Cl,P												VOCs,Cl,P										
ICT-13A	west, annual	2/21/11	Feb-12		VOCs,Cl,P												VOCs,Cl,P										
ICT-13B	NW, annual	2/21/11	Feb-12		VOCs,Cl,P												VOCs,Cl,P										
ICT-13D	NW, annual	2/21/11	Feb-12		VOCs,Cl,P												VOCs,Cl,P										
ICT-13E	north, annual	2/21/11	Feb-12		VOCs,Cl,P												VOCs,Cl,P										
ICT-13F	north, annual	2/21/11	Feb-12		VOCs,Cl,P												VOCs,Cl,P										
ICT-14B	NE, annual	2/21/11	Feb-12		VOCs,Cl,P												VOCs,Cl,P										
ICT-14C	NE, annual	2/21/11	Feb-12		VOCs,Cl,P												VOCs,Cl,P										
ICT-14D	NE, annual	2/21/11	Feb-12		VOCs,Cl,P												VOCs,Cl,P										
18WW07	north	11/10/05	SAN																								
18WW08	north, semi-annual	09/15/11	Mar-12			VOCs,Cl,P,TM						VOCs,Cl,P,TM					VOCs,Cl,P,TM						VOCs,Cl,P,TM				
18WW09	north, semi-annual	09/15/11	Mar-12			VOCs,Cl,P,TM						VOCs,Cl,P,TM					VOCs,Cl,P,TM						VOCs,Cl,P,TM				
18WW10	west, semi-annual	09/14/11	Mar-12			VOCs,Cl,P,TM						VOCs,Cl,P,TM					VOCs,Cl,P,TM						VOCs,Cl,P,TM				
18WW11	west, semi-annual	3/16/11	Mar-12																								
18WW17	east	11/17/05	SAN																								
18WW20	north, semi-annual	09/14/11	Mar-12			VOCs,Cl,P,TM						VOCs,Cl,P,TM					VOCs,Cl,P,TM						VOCs,Cl,P,TM				
18WW21	NE	11/10/05	SAN																								
C-01	south	11/10/05	SAN																								
C-02	NW, semi-annual	3/17/11	Mar-12																								
C-04	NE, semi-annual	09/12/11	Mar-12			VOCs,Cl,P,TM						VOCs,Cl,P,TM					VOCs,Cl,P,TM						VOCs,Cl,P,TM				
C-04A	SAN	5/11/06	SAN																								
C8	east, semi-annual	09/12/11	Mar-12			VOCs,Cl,P,TM						VOCs,Cl,P,TM					VOCs,Cl,P,TM						VOCs,Cl,P,TM				
MW-1	inside CT perimeter	5/11/06	SAN																								
MW-2	inside CT perimeter, semi-annual	9/21/11	Mar-12			VOCs,Cl,P,TM						VOCs,Cl,P,TM					VOCs,Cl,P,TM						VOCs,Cl,P,TM				
MW-3	inside CT perimeter	5/11/06	SAN																								
MW-4	inside CT perimeter	5/11/06	SAN																								
MW-6	inside CT perimeter	5/11/06	SAN																								
MW-9	inside CT perimeter	5/11/06	SAN			VOCs,Cl,P,TM						VOCs,Cl,P,TM					VOCs,Cl,P,TM						VOCs,Cl,P,TM				
AWD1	west along CT	9/13/11	SAN			VOCs,Cl,P,TM						VOCs,Cl,P,TM					VOCs,Cl,P,TM						VOCs,Cl,P,TM				
AWD3	inside CT perimeter	9/13/11	SAN			VOCs,Cl,P,TM						VOCs,Cl,P,TM					VOCs,Cl,P,TM						VOCs,Cl,P,TM				
AWD2	inside CT perimeter	5/11/06	SAN																								
AWD4	north	9/13/11	SAN																								
MW-5	inside CT perimeter	5/11/06	SAN																								
MW-7	inside CT perimeter	9/20/11	SAN			VOCs,Cl,P,TM																					

Master Groundwater Sampling Schedule  
Longhorn Army Ammunition Plant  
Updated: 01/15/12

				2011												2012											
Site/Well ID	Well description	Last Date Sampled	Next Event*	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
MW-129	west, along CT	9/21/11	SAN																								
C9	south, semi-annual	3/14/11	Mar-12																								
C-10	south	5/11/06	SAN																								
C6	2100 ft north of site, semi-annual	9/12/11	Mar-12			VOCs,Cl,P,TM						VOCs,Cl,P,TM						VOCs,Cl,P,TM					VOCs,Cl,P,TM				
C3	east, semi-annual	9/12/11	Mar-12			VOCs,Cl,P,TM						VOCs,Cl,P,TM						VOCs,Cl,P,TM					VOCs,Cl,P,TM				
LHAAP-29																											
TBD																											
LHAAP-37																											
TBD																											
LHAAP-46																											
TBD																											
LHAAP-47																											
TBD																											
LHAAP-50																											
TBD																											
LHAAP-35A(58)																											
TBD																											
Creek Sampling (LHAAP-47/50)																											
TBD																											
Perimeter Well Sampling																											
108		9/28/11	Sep-12									P											P				
110		9/11-dry	Sep-12									P											P				
111		9/11-dry	Sep-12									P											P				
112		9/28/11	Sep-12									P											P				
133		9/28/11	Mar-12			P						P						P					P				
134		9/28/11	Mar-12			P						P						P					P				
Ongoing Creek Sampling (Harrison Bayou & Goose Prairie Creek)																											
HBW-1	Harrison Bayou Water	12/14/11	Mar-12			P			P			P			P			P			P		P			P	
HBW-7	Harrison Bayou Water	12/14/11	Mar-12			P			P			P			P			P			P		P			P	
HBW-10	Harrison Bayou Water	12/14/11	Mar-12			P			P			P			P			P			P		P			P	
GPW-1	Goose Prairie Creek Water	12/14/11	Mar-12			P			P			P			P			P			P		P			P	
GPW-3	Goose Prairie Creek Water	12/14/11	Mar-12			P			P			P			P			P			P		P			P	

**Notes & abbreviations:**  
\* - Two weeks prior to next sampling event, TCEQ & EPA will be notified of the tentative date. If TCEQ or EPA would like to be onsite, a couple of days priot to sampling, TCEQ & EPA will contacted with a more firm date & time.  
TBD - to be determined after remedial design of final remedy  
EW- Extraction well  
ICT- Interceptor collection trench  
NE- northwest  
NW- northwest  
SW- southwest  
CT- Collection trench  
SAN- Sample as needed  
MNA - MNA parameters (see list below)  
VOC - volatile organic compounds (Method 8260)  
TM- TM  
P- Perchlorate  
SVOCs  
  
MNA parameters:  
nitrates  
nitrites  
sulfates  
pH  
Eh (redox potential)  
conductivity  
temperature  
dissolved oxygen (DO)  
ferrous iron (HACH meter in field)  
Cl- Chloride  
methane  
ethane  
ethene  
inorganic & organic carbon  
Dehalococcolides

**Perchlorate Results for Creek Sampling**  
**Longhorn Army Ammunition Plant, Karnack, Texas**

Creek Sample ID	GW-Res	Mar 2008	Jun 2008	Sep 2008	Dec 2008	May 2009	July 2009	Aug 2009	Sep 2009	Dec 2009	Mar 2010	Jun 2010	Sep 2010	Dec 2010	Mar 2011	Jun 2011	Sep 2011	Dec 2011
GPW-1	26	27	0.5U	0.5U	0.22U	16	4U	NS	1.2U	3.7	1.3J	0.6U	dry	0.1U	8.7	dry	dry	1.76
GPW-3	26	21.9	9.42	1.1	0.22U	8.9	4U	NS	0.6U	2.8	1.8J	0.6U	dry	0.199J	0.673	dry	dry	1.31
HBW-1	26	0.5U	0.5U	0.5U	0.22U	0.55U	4U	NS	1.5U	0.275U	1.5U	0.6U	dry	0.1U	0.2U	dry	dry	0.1U
HBW-7	26	0.5U	0.5U	0.5U	0.22U	0.55U	4U	24*	1.2U	0.275U	1.5U	0.6U	dry	0.1U	0.2U	dry	dry	0.171J
HBW-10	26	0.5U	0.5U	0.5U	0.22U	0.55U	4U	NS	1.5U	0.275U	1.2U	0.6U	dry	0.1U	0.2U	dry	dry	0.1U

**NOTES:**

all units in micrograms/liter (µg/L)

\* One sample taken during GWTP shutdown

U undetected

J approximate value present below normal reporting limit

GW-Res groundwater medium-specific concentration for residential use

NS not sampled

GP is Goose Prairie Creek

HB is Harrison Bayou

W is surface water

**Creek Conditions for last six sampling events:**

September 2010 conditions: All creek sampling locations were dry in September.

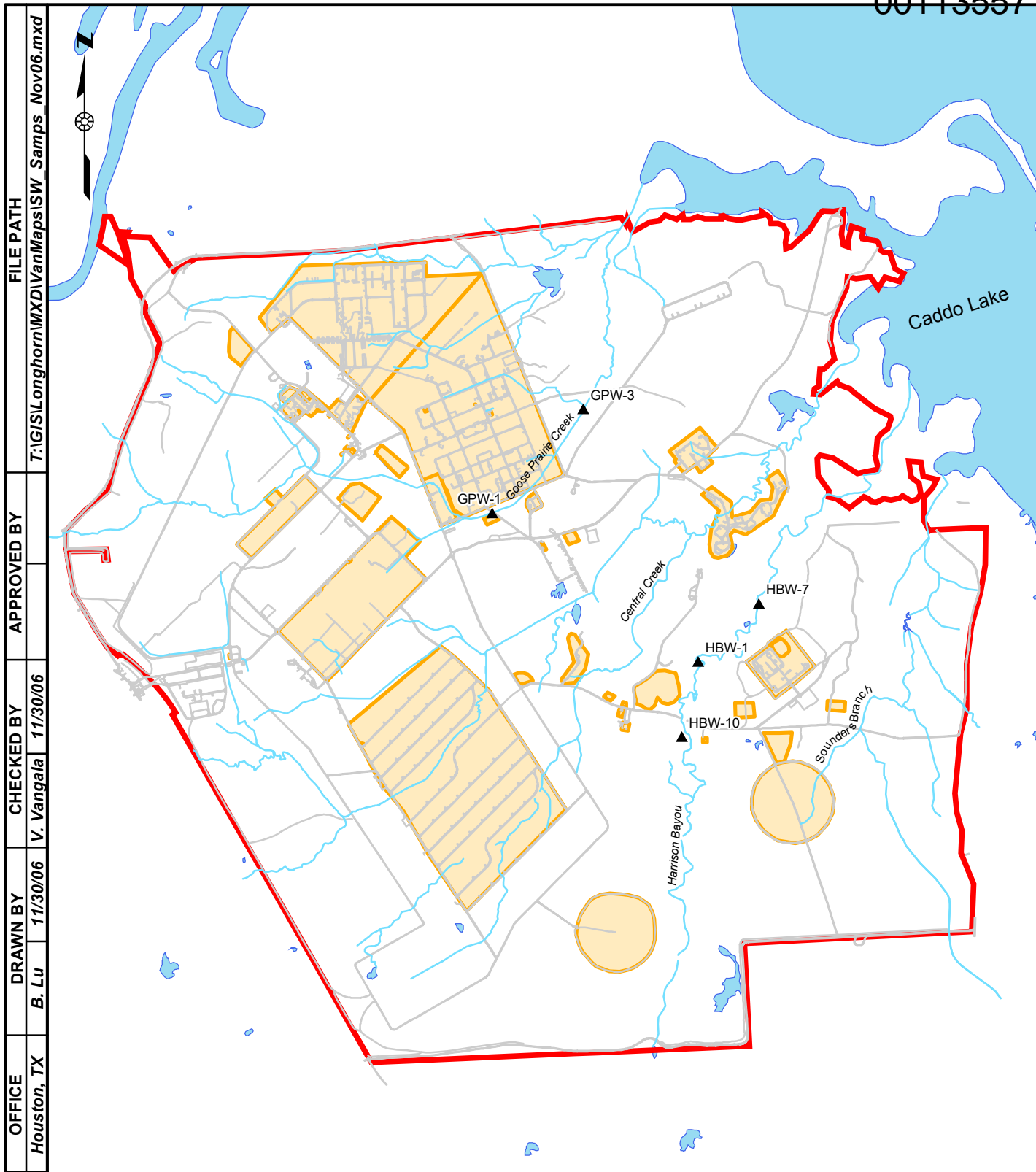
December 2010 conditions: GP sampling locations some water but no visible flow; HB sampling locations plenty of water volume but very little flow

March 2011 conditions: GP sampling locations slow flow; HB sampling locations fairly good flow

June 2011 conditions: All creek sampling locations were dry in June.

September 2011 conditions: All creek sampling locations were dry in September.

December 2011 conditions: Small amount of flow at Harrison Bayou locations and no visible flow at Goose Prairie Creek locations.



OFFICE	DRAWN BY	CHECKED BY	APPROVED BY	FILE PATH
Houston, TX	B. Lu	V. Vangala		T:\GIS\Longhorn\MXD\VanMaps\SW_Samps_Nov06.mxd

Plot Date: 11/06

### Legend

- ▲ Surface Water Sampling Location
- Stream
- Road
- Site
- Lake

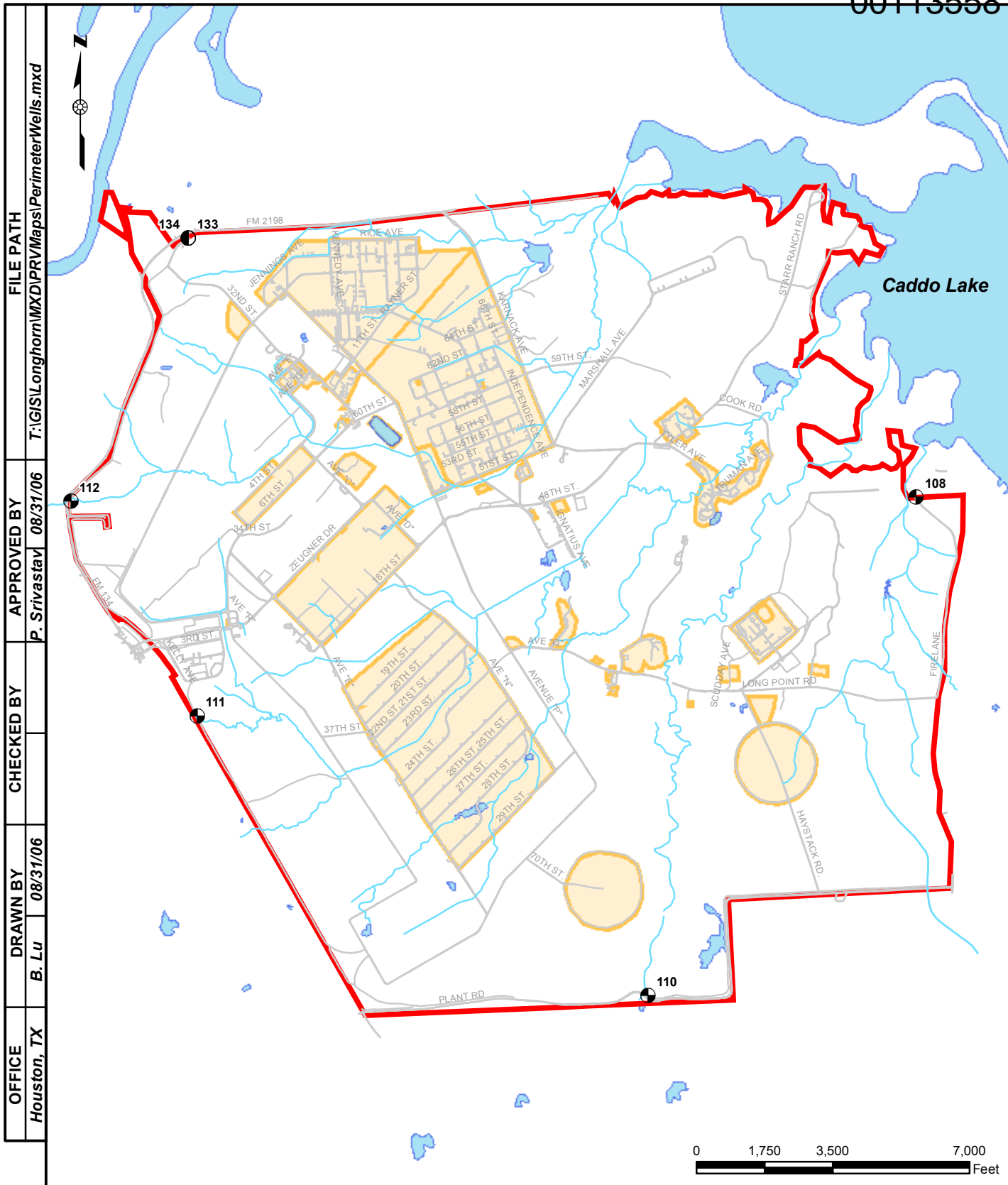


U.S. ARMY CORPS OF ENGINEERS  
TULSA DISTRICT  
TULSA, OKLAHOMA

FIGURE 1

### SURFACE WATER SAMPLING LOCATION

LONGHORN ARMY AMMUNITION PLANT  
KARNACK, TEXAS



OFFICE	DRAWN BY	CHECKED BY	APPROVED BY	FILE PATH
Houston, TX	B. Lu	08/31/06	P. Srivastav	08/31/06
				T:\GIS\Longhorn\MXD\IPRV\Maps\PerimeterWells.mxd

Plot Date: 08/06

### Legend

- Shallow Perimeter Well
- Intermediate Perimeter Well
- Lake/Pond
- LHAAP Approximate Boundary
- Stream
- Road
- Site



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

FIGURE 1

## PERIMETER WELL LOCATION MAP

LONGHORN ARMY AMMUNITION PLANT  
KARNACK, TEXAS

# LONGHORN ARMY AMMUNITION PLANT

## Remedial Design for LHAAP-35B(37) and LHAAP-67





# Outline

- Remedial Design for LHAAP-35B(37) and LHAAP-67
  - Site History
  - Site Characteristics
  - Remedial Investigation Results
  - Remedial Design



# Remedial Design LHAAP-35B(37) and LHAAP-67



## LEGEND

- Road
- Stream
- Site
- Approximate LHAAP Boundary
- LHAAP Water Supply Well



## LEGEND

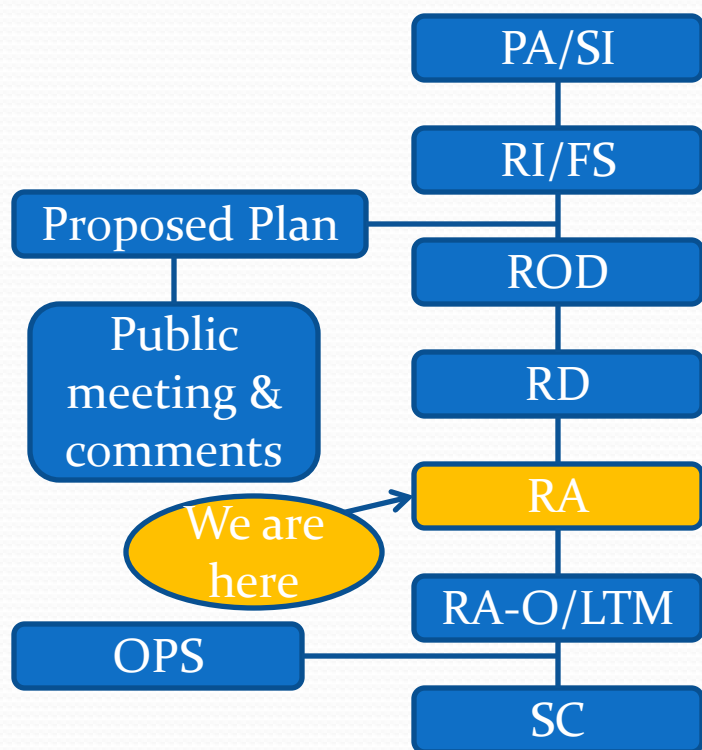
- Approximate LHAAP Boundary
- Road
- Stream
- Site
- LHAAP Water Supply Well



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

FIGURE 2-2  
SITE LOCATION MAP  
REMEDIAL DESIGN  
LHAAP-35B(37) AND LHAAP-67, GROUP 4  
LONGHORN ARMY AMMUNITION PLANT  
KARNACK, TEXAS

# Outline of CERCLA\* process for the cleanup of NPL sites



- Preliminary Assessment/Site Investigation (Placed on National Priorities List (NPL) in August 1990)
- Remedial Investigation/Feasibility Study (1992 - 2010) includes risk assessments
- Proposed Plan & Public Comment Period
- Record of Decision
- Remedial Design
- Remedial Action
- Remedial Action – Operations/Long-term Monitoring
- Operating Properly & Successfully
- Site Closure

\*Comprehensive Environmental Response, Compensation, and Liability Act

# LHAAP-35B(37) Chemical Laboratory Site History

- Built 1953-1955 (Also previously known as building 29-A)
- Research and Testing
- Waste pad 1985-1997
- One waste rack sump- removed in 1996
- In 1998 used as a staging site for remedial investigations
- Active through 1999

# LHAAP-35B(37) Chemical Laboratory Site Characteristics

- Located in north central portion of LHAAP
- 12.2 Acres
- Consists of asphalt-paved roads, parking area, concrete structure/foundation remains of Chemical Laboratory & several administrative buildings and wooded area
- Relatively flat with surface drainage flowing to Goose Prairie Creek

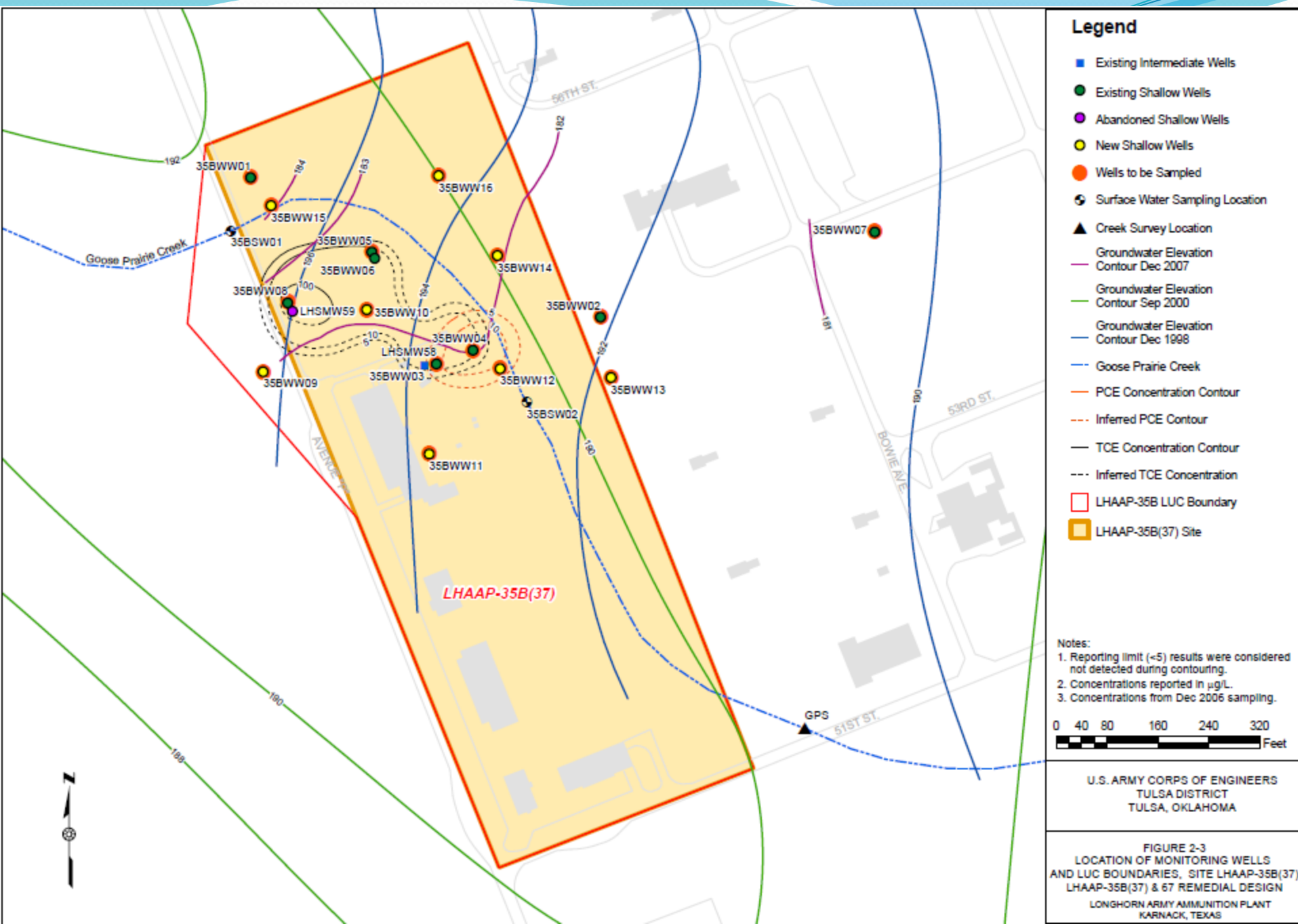




# LHAAP-35B(37) Chemical Laboratory Site Investigation Summary

- Several Investigations 1993-1998
- No significant contamination in soil
- Constituents detected in shallow groundwater zone: 1,1-dichloroethene (DCE), tetrachloroethene(PCE) and its daughter products trichloroethene(TCE)
- Human Health Risk Assessment 1998-2003
- Ecological Risk 2007





# LHAAP-35B(37) Chemical Laboratory Remedial Design Contd.

- 6 wells within the plume to evaluate MNA
- 9 wells outside plume to ensure contaminated groundwater does not migrate to surface water at unacceptable levels and to confirm plume limits
- 2 surface water sampling locations
- Quarterly monitoring 2 years, semi-annual 3 years & annual to next Five Year Review
- Monitoring for: 1,1 DCE, TCE, TCA, VC, Antimony and Thallium
- Estimated time to reach cleanup levels: 39-43 years



## LHAAP-67, Former Aboveground Storage Tank Farm Site History

- Consisted of 7 aboveground storage tanks of unknown size
- Earthen dike
- Site personnel indicated tanks stored solvents
- Tanks have been removed and only structure remaining at site is a railroad bed

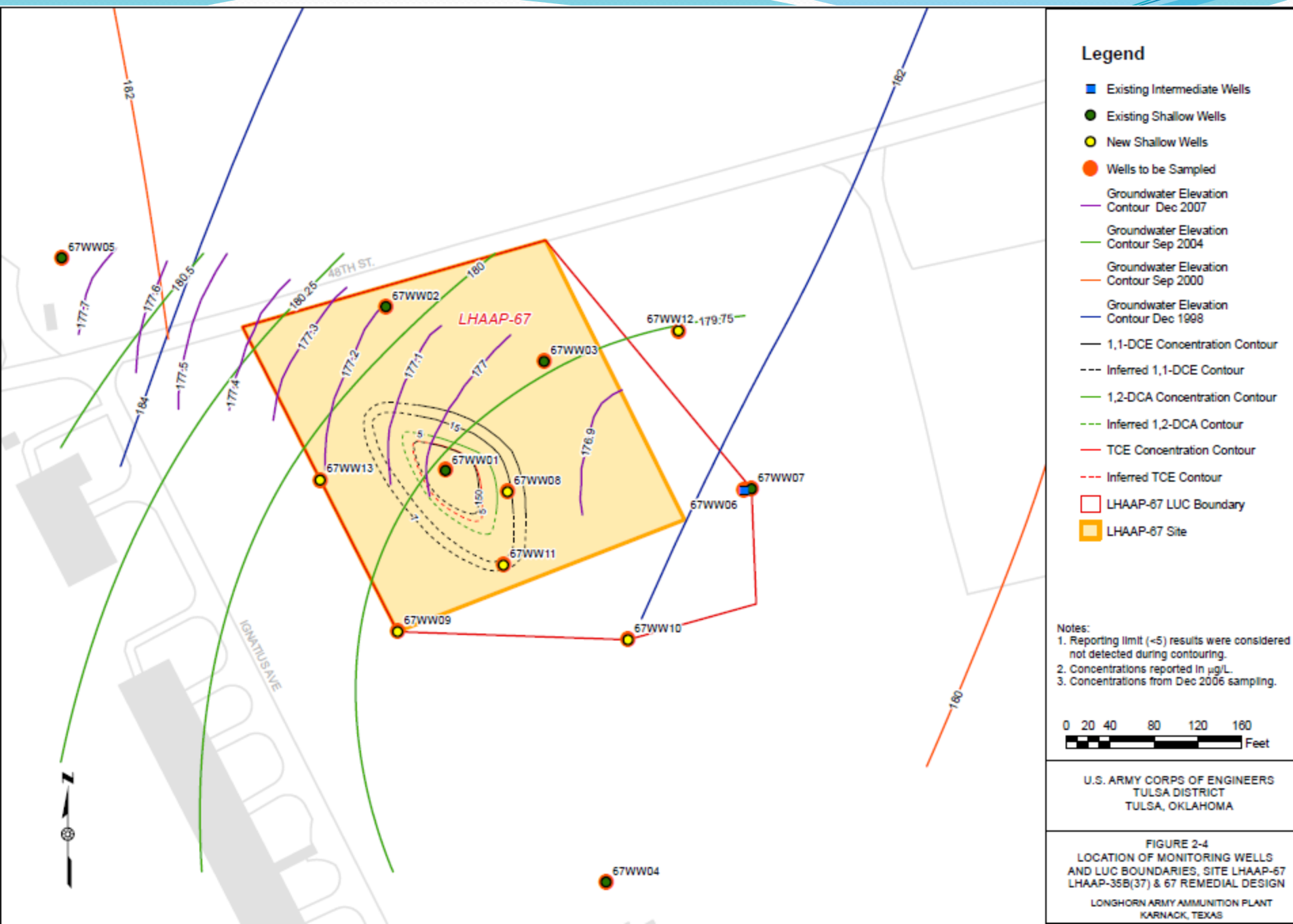
# LHAAP-67, Former Aboveground Storage Tank Farm Site Characteristics

- Central portion of LHAAP
- 1.91 Acres
- Relatively flat
- Nearest significant surface water body is Central Creek located ~870 feet southeast of the site

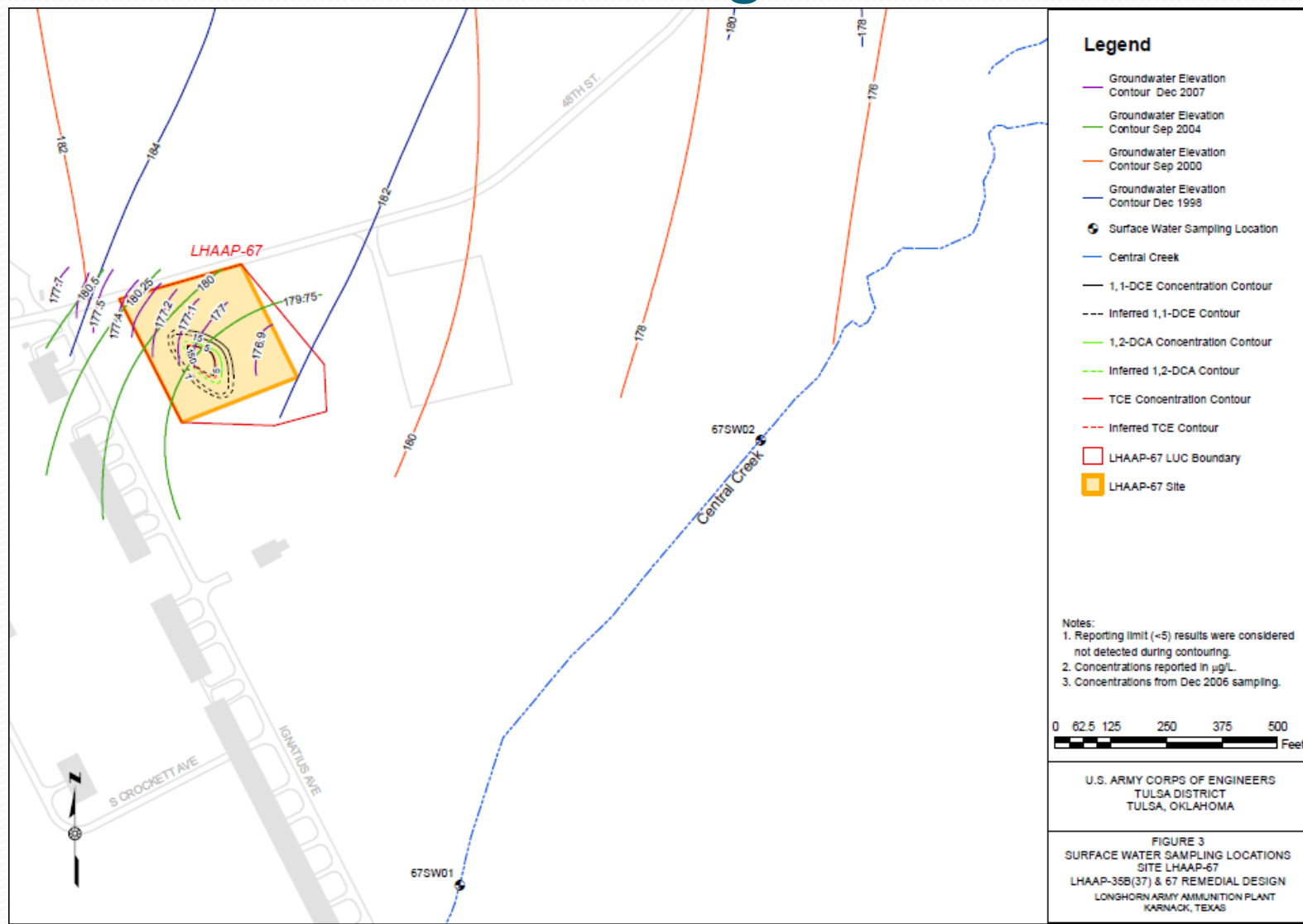


# LHAAP-67, Former Aboveground Storage Tank Farm Site Investigation Summary

- Several Investigations 1998-2006
- Results indicated no significant contamination in soil
- Constituents detected in shallow groundwater zone: 1,1 dichlorethene (DCE), 1,2 dichloroethane(DCA), 1,1,1-trichloroethane(TCA), 1,1,2-TCA and trichloroethene(TCE)
- Human Health Risk Assessment 1998-2003
- Ecological Risk 2007



# LHAAP-67, Former Aboveground Storage Tank Farm Remedial Design Contd.



# LHAAP-67, Former Aboveground Storage Tank Farm Remedial Design Contd.

- 3 wells within the plume to evaluate MNA
- 10 wells outside plume to ensure contaminated groundwater does not migrate to surface water at unacceptable levels and to confirm plume limits
- 2 surface water sampling locations
- Quarterly monitoring 2 years, semi-annual 3 years & annual to next Five Year Review
- Monitoring for: 1,1 DCE, 1,1 DCA, 1,1,1-TCA, 1,1,2-TCA, TCE and VC
- Estimated time to reach cleanup levels: 21-66 years



# *In-Planta* Sampling

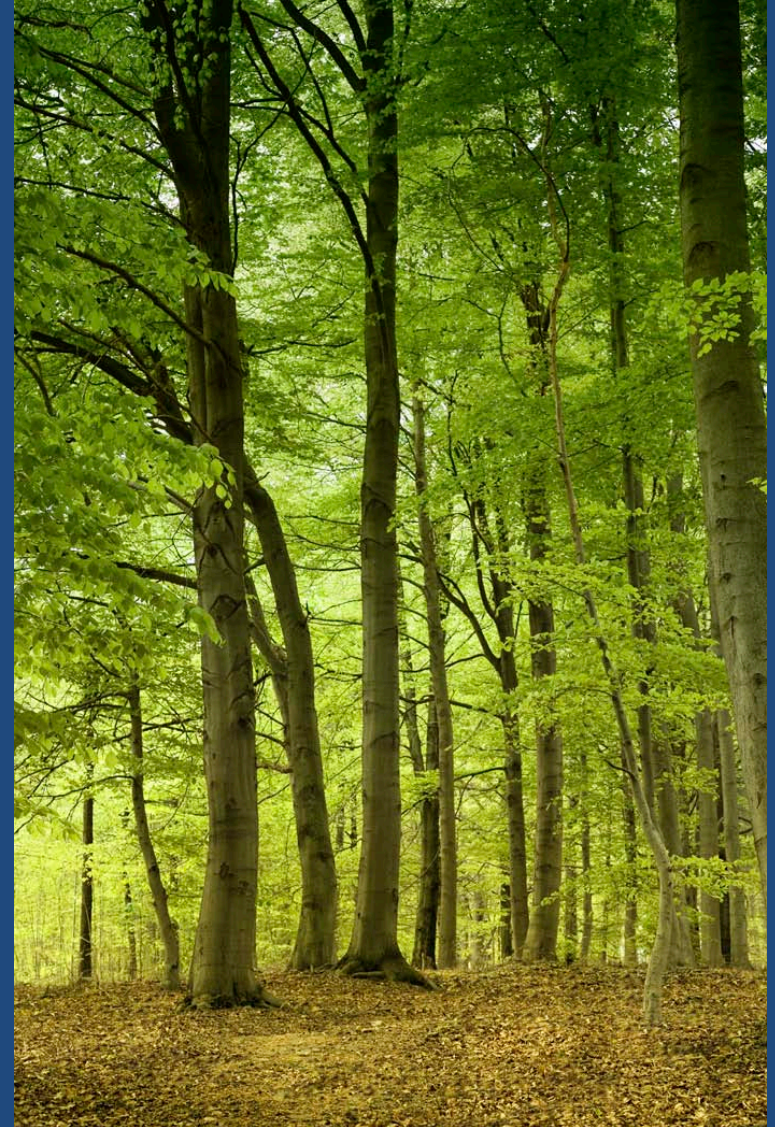
Fast, Cheap & Green Site Assessment & Phytoforensics

**Rich Mayer**  
**US EPA Dallas ,TX**

**Longhorn RAB Meeting**  
**Jan. 19<sup>th</sup>, 2012**

# Objectives of Tree Core Sampling

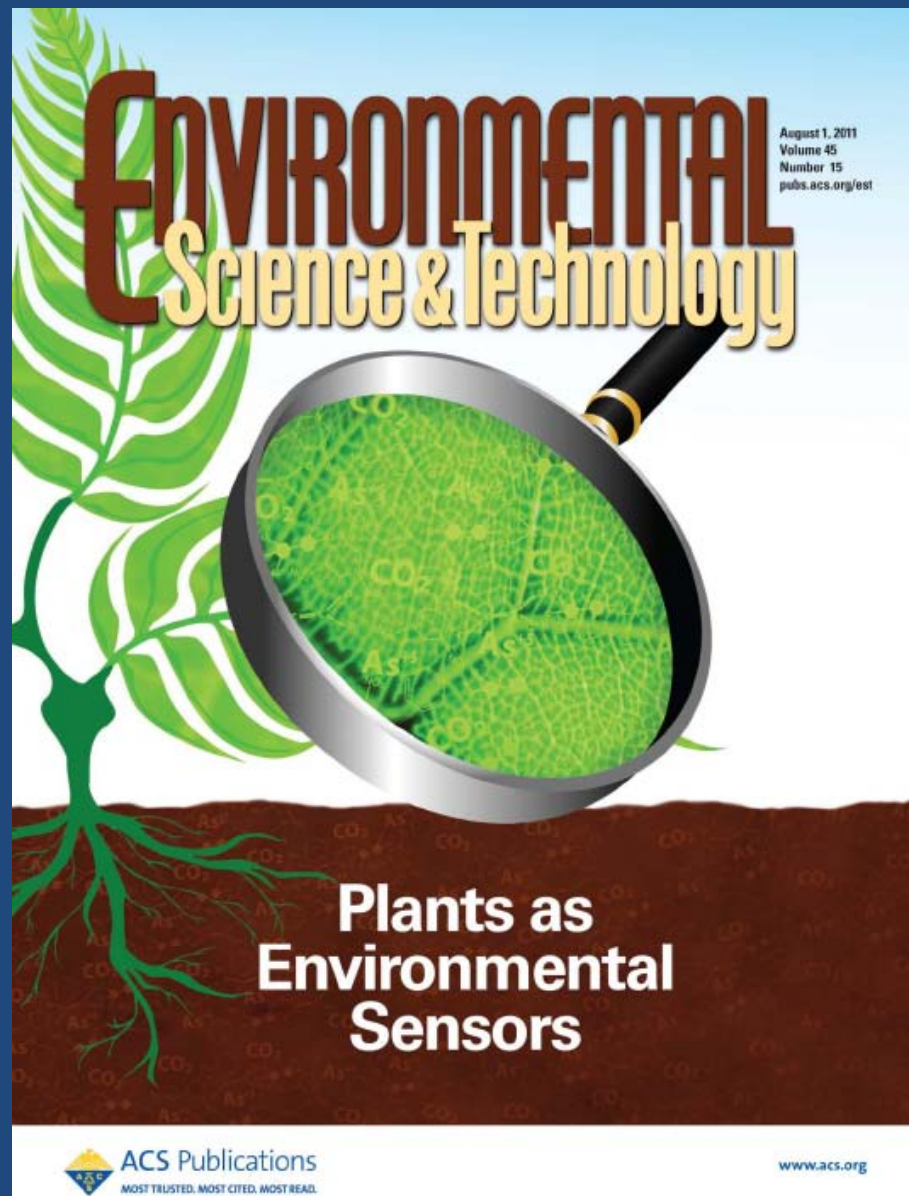
- Validate TCE in groundwater in a qualitative manner thru the use of tree coring and analysis
- Determine if perchlorate in groundwater can be qualitatively measured thru tree coring analysis





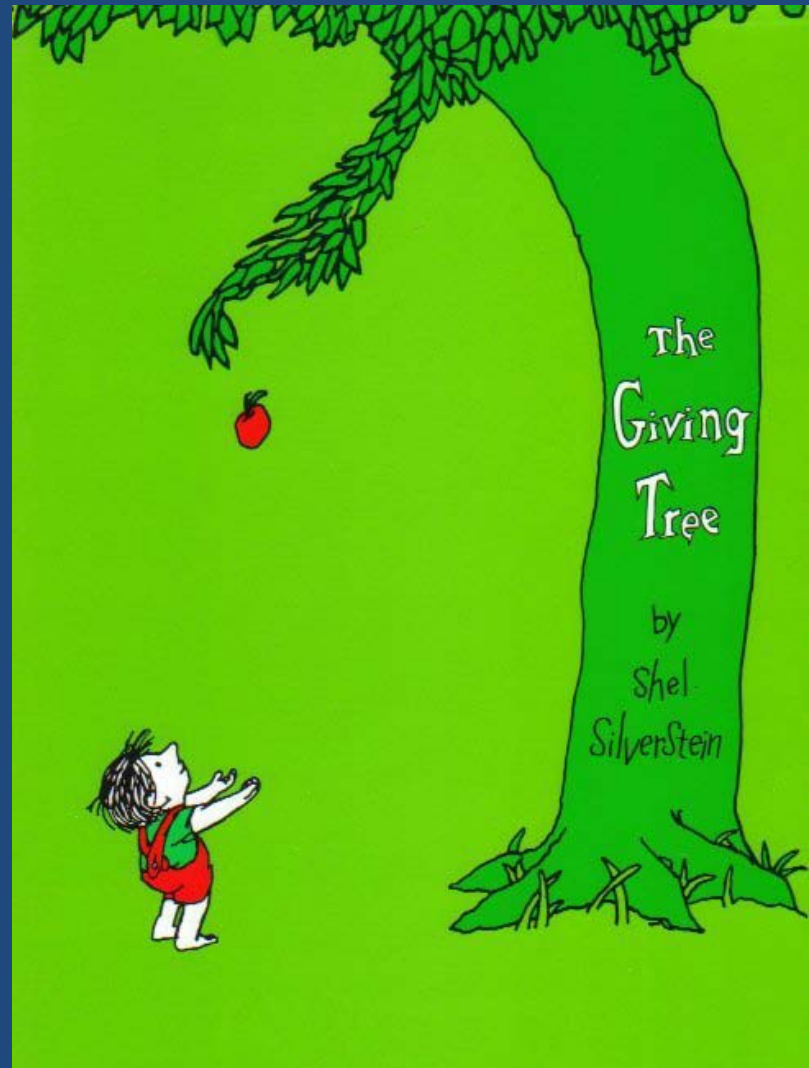
# Introducing PhytoForensics

- Plant sampling for:
  - Screening large areas, fast, minimal impact
  - Monitoring natural treatment systems.. LARGE plumes
  - Forensics using dendrochemistry to age-date events.

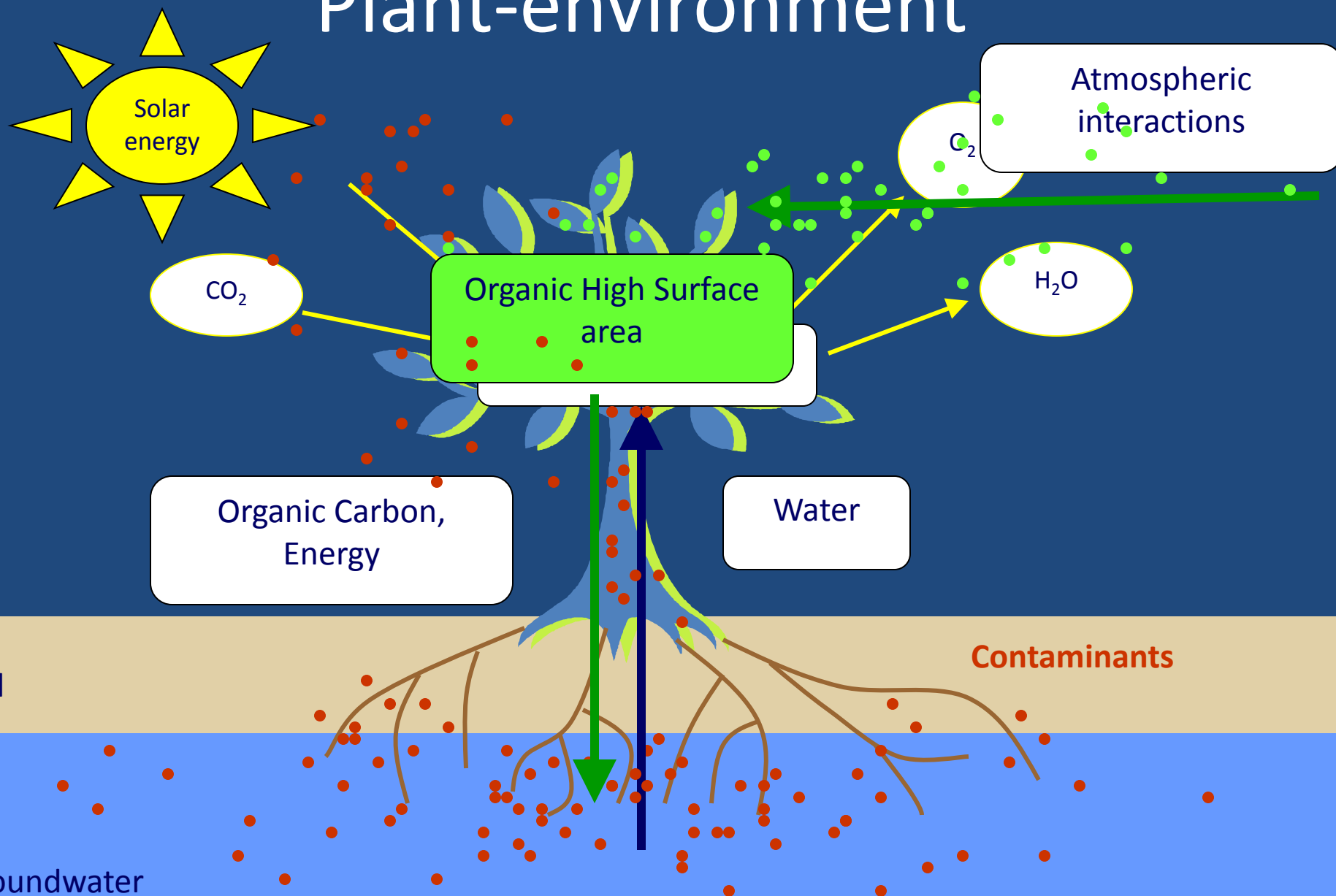


# Mother nature can tell us a lot...

- The data is in there...
- How do we get it out?
- How do we interpret it...  
as groundwater,  
soil, vapor data?



# Plant-environment



# Tree Coring

- Methods developed by D. Vroblesky - USGS



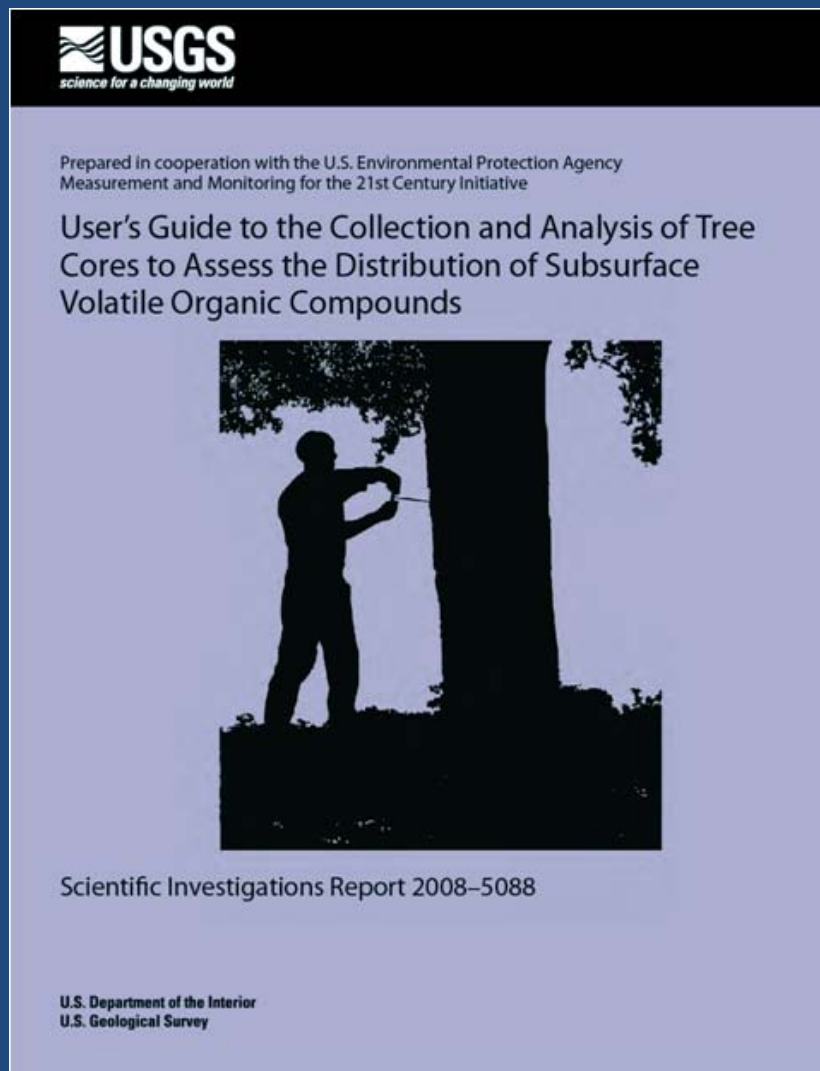


# Tree Coring

- Collect a core sample of the trunk/stem
- Core sample placed into vial
- After equilibration time headspace Gas Chromatograph(GC) analysis
- Partition coefficients determine concentrations
- Ground Truth core sample results with Groundwater Sampling of existing wells



# Phytoforensics Tech Transfer



# Questions???

mayer.richard@epa.gov

# Quality Assurance Split Sampling at Selected Sites, Longhorn Army Ammunition Plant

Longhorn Restoration Advisory Board

January 19, 2012

Kent D. Becher

USGS [kdbecher@usgs.gov](mailto:kdbecher@usgs.gov)



# Background

- USGS has a partnership with USEPA through an interagency agreement. USGS provides technical support for USEPA Region 6.
- USEPA asked the USGS to collected quality assurance split (duplicate) samples at several sites on the facility.

# Background

- USGS prepared a quality assurance project plan and USEPA approved the plan.

# Objectives

- Observe sampling procedures of U.S. Army contractor.
- Collect split samples from various wells and surface water sites.
- Report findings to EPA in a field and data comparison report.

# Sites/Dates

- March 2011- selected wells on site 18/24 (6 wells) and surface water sites (6 sites) on Goose Prairie Creek and Harrison Bayou.
- June 2011- LHAAP-12 – all site wells (5).
- September 2011-18/24 - expanded well selection (24 wells).

# USGS observed the sampling procedures used by the U.S. Army contractor

00113589



# Laboratory Result Comparisons

- The relative percent difference (RPD) between two quantities is the difference between them, expressed as a comparison to the size of one or both of them. Such measures are unit less.

# Results

- March 2011 (site 18/24, 24 wells) – RPDs were exceeded in 3 out of 30 paired samples.
- June 2011 (site 12, 5 wells)- There were only two detections. One RPD was exceeded.
- September 2011 (site 18/24, 24 wells)- RPDs were exceeded in 15 of 91 paired samples.

# Results

- Surface water sampling procedures were compared and none of the RPDs were exceeded.





# Conclusions

- Sampling procedures are being followed by the U.S. Army contractor as described in the Site Wide Sampling Plan.
- Laboratory result comparisons indicate excellent repetition.

# Look Ahead 2012

## Upcoming Field Work:

Quarterly groundwater monitoring in March:

LHAAP-18/24, LHAAP-16, LHAAP-12

Quarterly surface water sampling for perchlorate in:

Harrison Bayou, Goose Prairie & Central Creeks

Well Installation at LHAAP-37

Bioplug Demonstration at LHAAP-37

# Look Ahead Cont'd

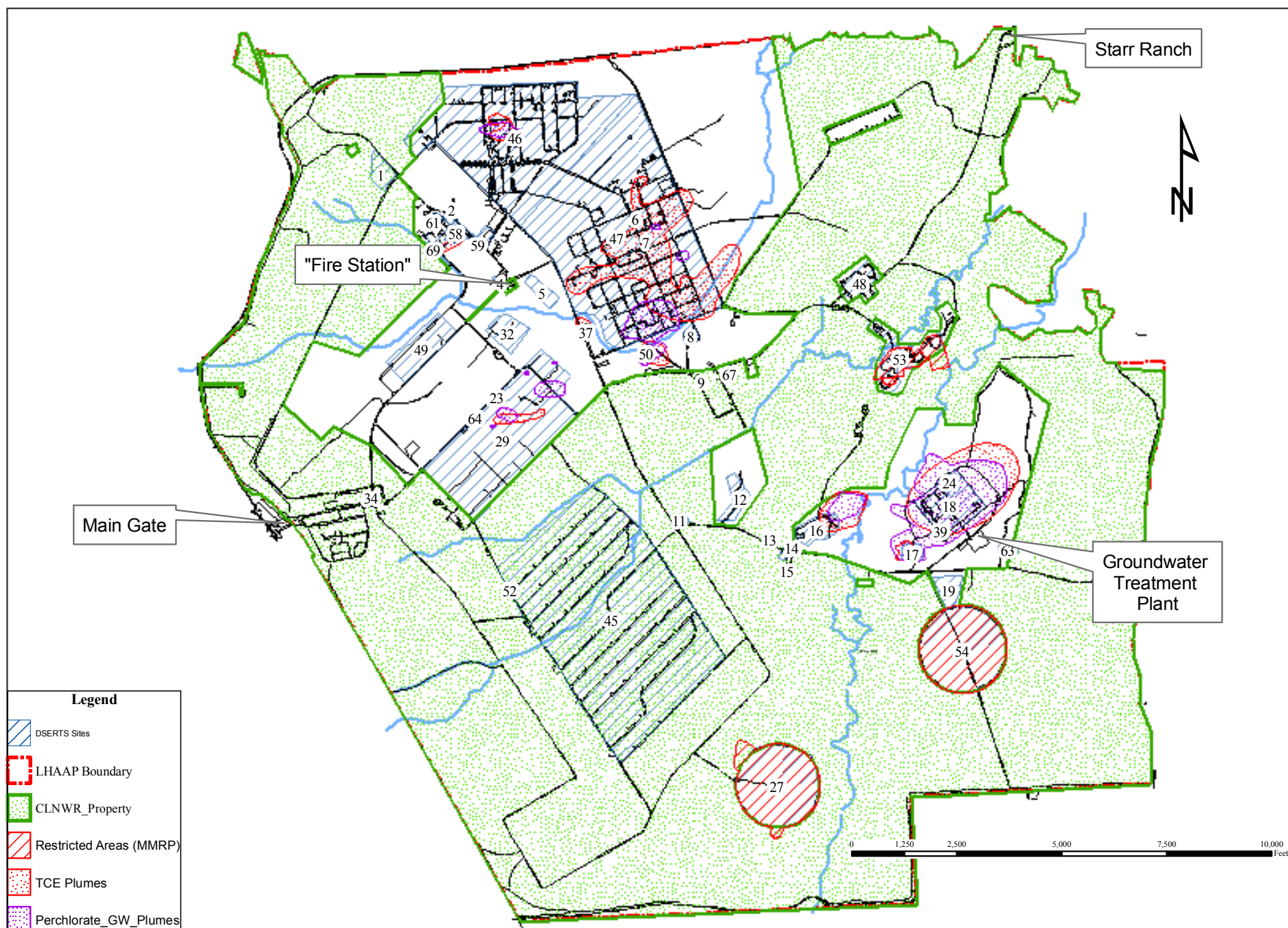
## Upcoming Documents

LHAAP-03 EECA

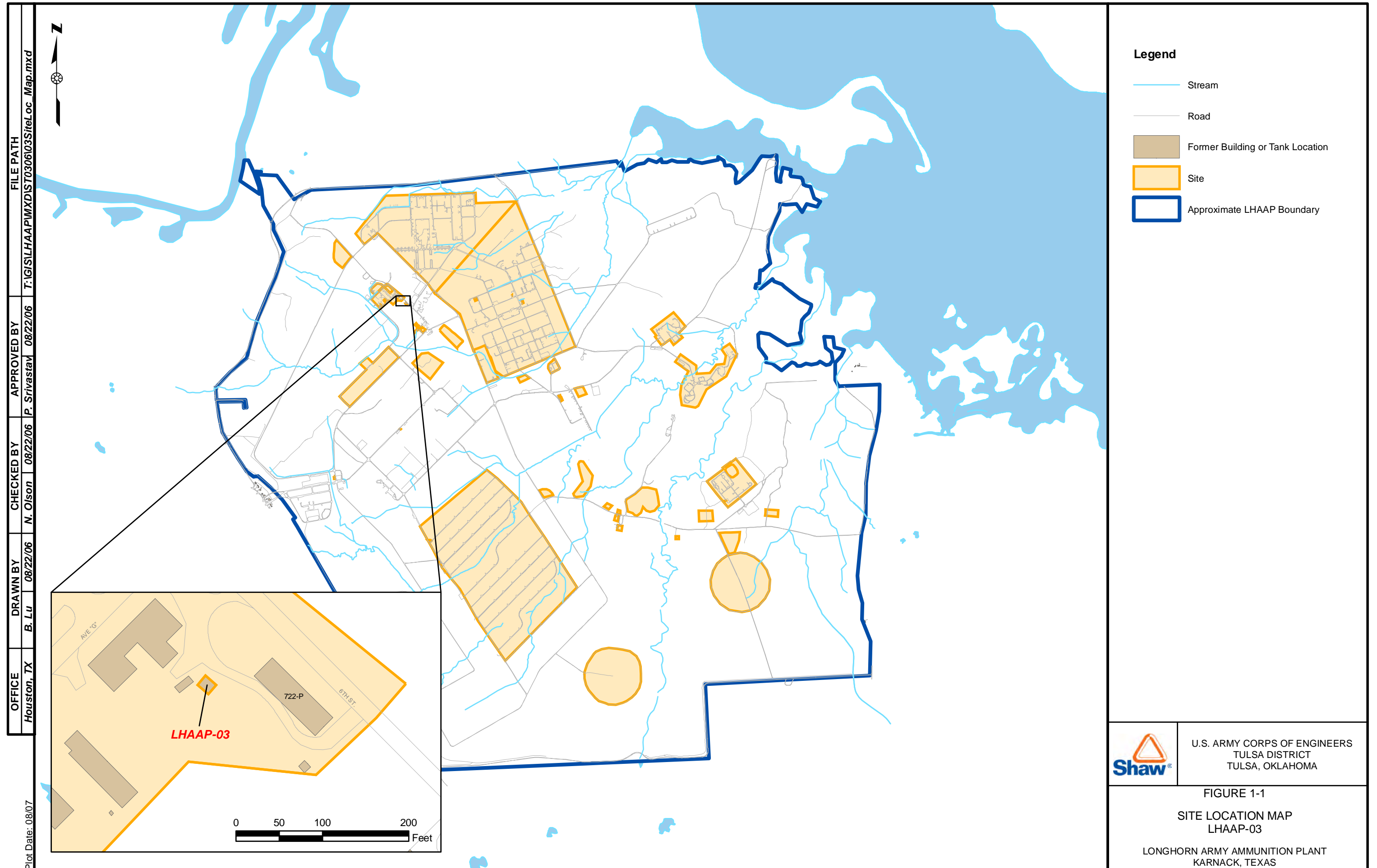
LHAAP-04 Final Feasibility Study

LHAAP-18/24 Final Feasibility Study

Multiple RAs (LHAAP-37, -67, -46, -50, -58)

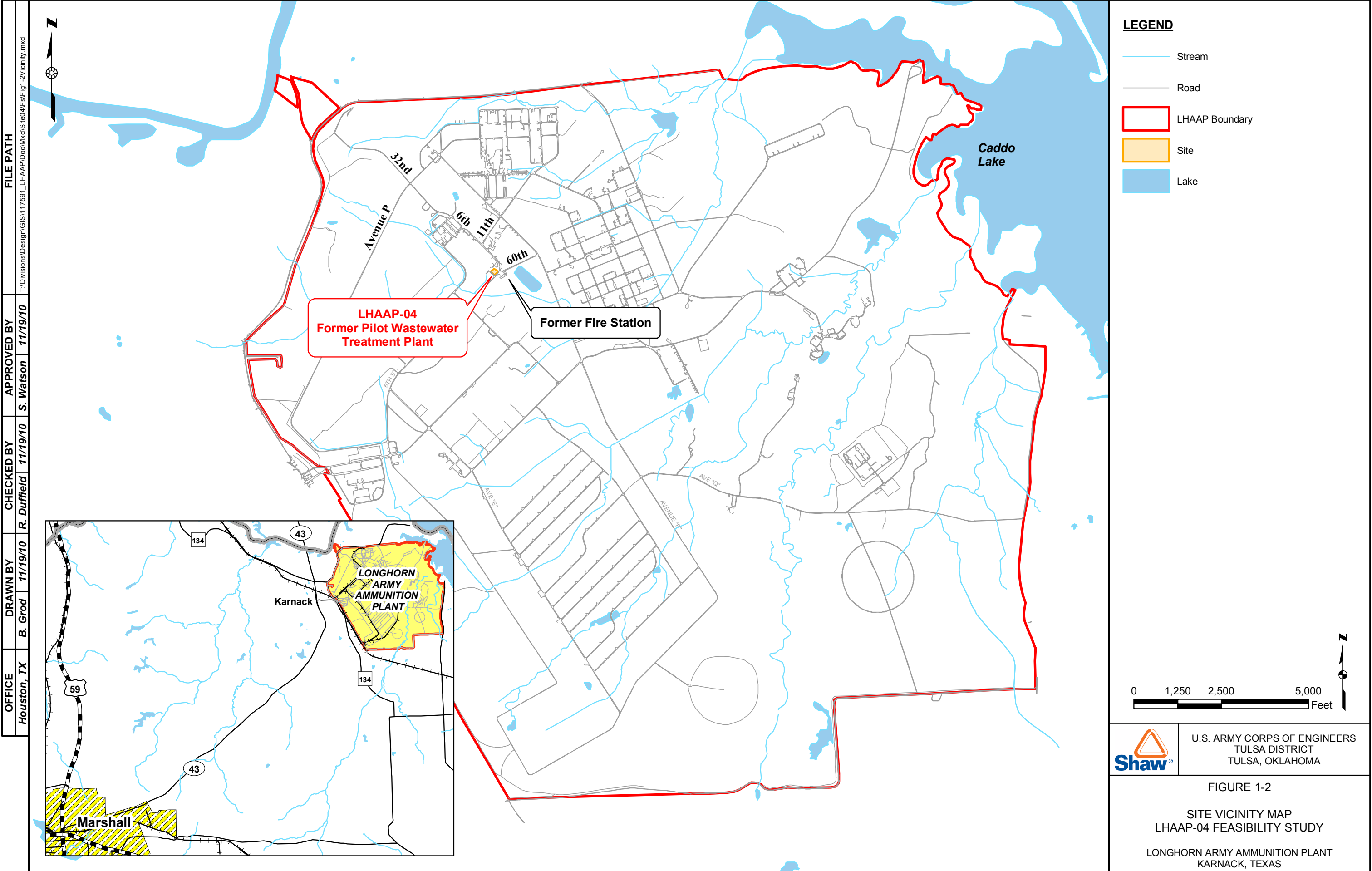


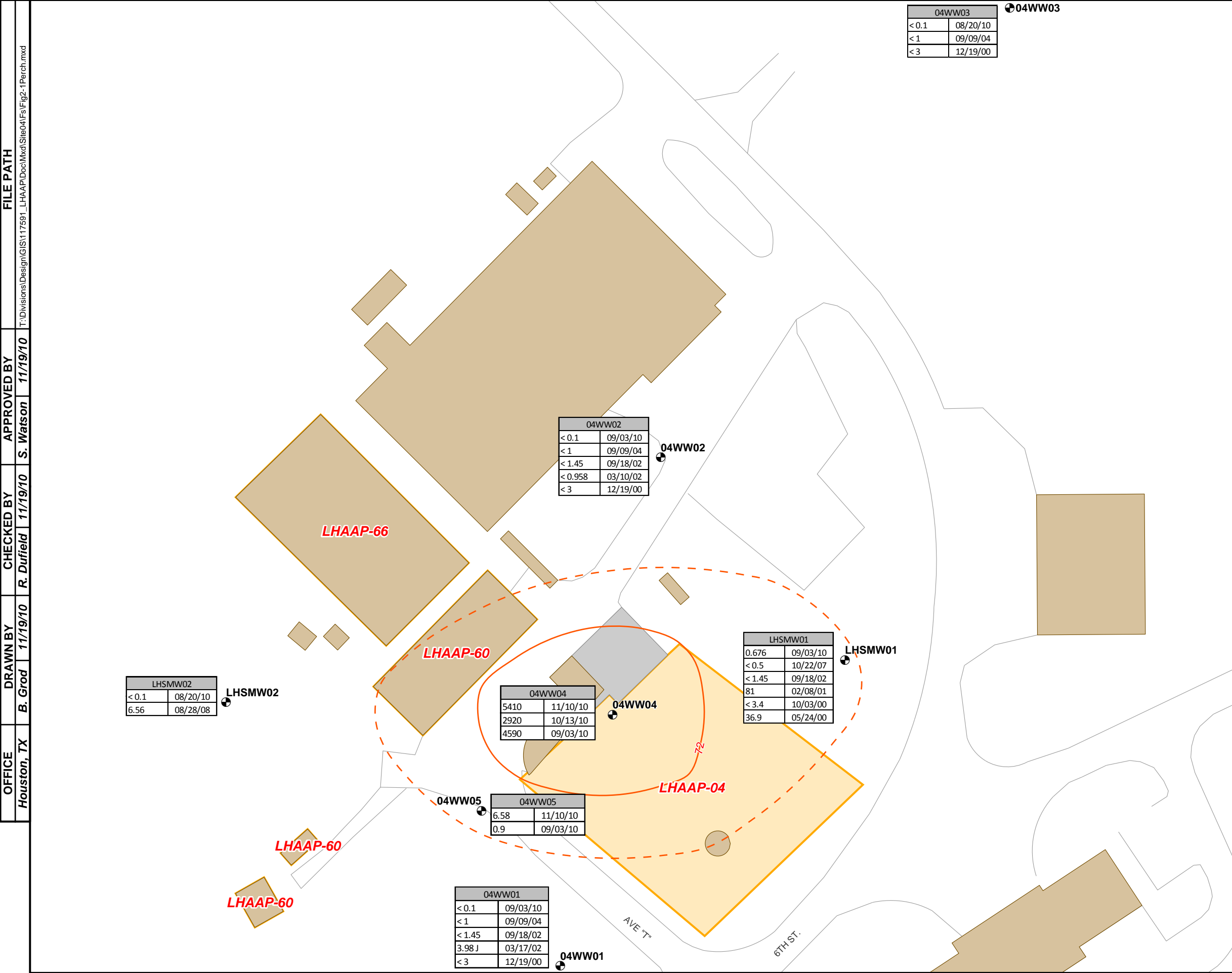
LONGHORN ARMY AMMUNITION PLANT / CADDO LAKE NATIONAL WILDLIFE REFUGE











< 0.1	08/20/10
< 1	09/09/04
< 3	12/19/00

04WW03

**LEGEND**

- Shallow Monitoring Well
- Perchlorate Plume (72 µg/L)
- Possible Past Extent of Perchlorate
- Road
- Concrete Removed During Excavation
- Concrete
- Site

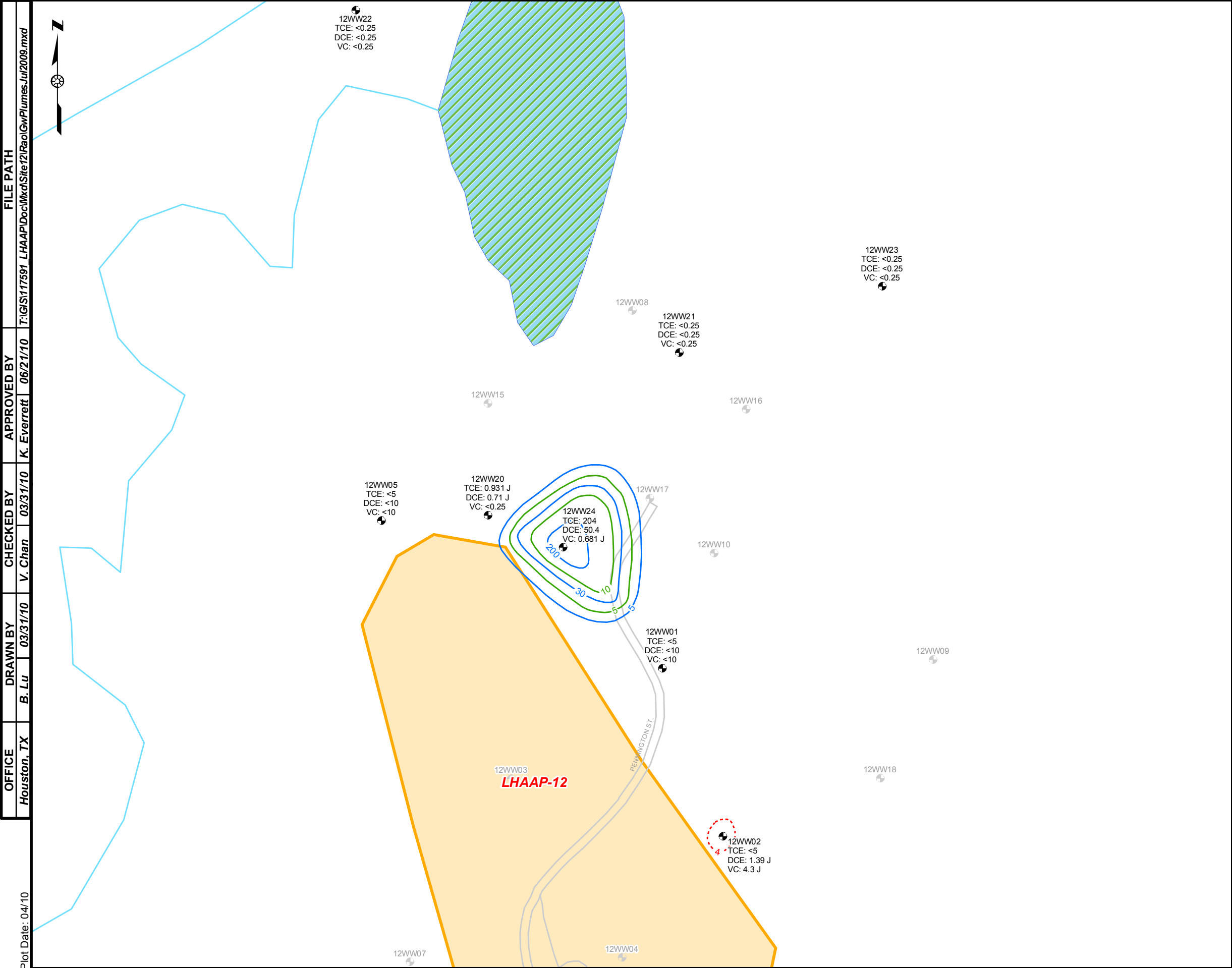
NOTES:

- Perchlorate concentrations reported in micrograms per liter (µg/L).
- Plume boundaries based on most recent results available at each well (2010).

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

FIGURE 2-1  
PERCHLORATE CONCENTRATIONS  
IN GROUNDWATER  
LHAAP-04 FEASIBILITY STUDY  
LONGHORN ARMY AMMUNITION PLANT  
KARNACK, TEXAS



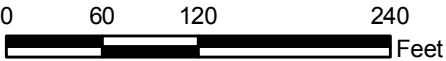


**LEGEND**

- Shallow Monitoring Well  
Abandoned in January 2006
- Existing Shallow Monitoring Well
- VC (Vinyl Chloride) Concentration Isopleth
- cis-1,2-DCE (Dichloroethene)  
Concentration Isopleth
- TCE (Trichloroethene)  
Concentration Isopleth
- Stream
- Road
- Drainage Feature
- Site (Boundary of Landfill Cap)

**Notes:**

- Concentrations reported in µg/L.
- Concentrations shown at 12WW20, 12WW21, 12WW22, 12WW23, and 12WW24 are from the June 2008 sampling event.
- 12WW01, 12WW02 and 12WW05 analytical data from December 2006.
- MCL (Maximum Contaminant Level) for TCE is 5 µg/L, for DCE is 70 µg/L, and for VC is 2 µg/L.
- "DCE" Concentrations indicated are cis-1,2-DCE.



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TULSA DISTRICT  
TULSA, OKLAHOMA

FIGURE 3-2  
GROUNDWATER  
CONTAMINATION PLUME MAP  
LHAAP-12, JULY 2009  
LONGHORN ARMY AMMUNITION PLANT  
KARNACK, TEXAS



**LONGHORN ARMY AMMUNITION PLANT**  
**Karnack, Texas**

***DRAFT MONTHLY MANAGERS' MEETING***

**AGENDA**

**DATE:** February 21, 2012  
**TIME:** 10:00 a.m.  
**PLACE:** Call-in Number Courtesy of Shaw: 866-692-4538/2372062

**Welcome**

**RMZ**

**Action Items**

**Army**

- Review LHAAP-18/24 logs from recent soil sampling.
- Methylene Chloride Degradation

**TCEQ**

- Review LHAAP-18/24 soil sampling results

**EPA**

- Review LHAAP-18/24 soil sampling results
- Methylene Chloride Degradation

**Shaw**

- Provide monitoring well coordinates from LHAAP-16 and -17 to EPA

**Defense Environmental Restoration Program (DERP) PBC Update**

**KE**

- Document Status/Environmental Sites (Table)
- Groundwater Treatment Plant
- Path forward for ECO

**DERP Total Environmental Restoration Contract Update**

**Army**

- LHAAP-37 Well Installation
- Pilot Demonstration at LHAAP-37 Status

**MMRP Update**

**Army**

- Update IRP Metals Issue

**Programmatic Issues**

**RMZ/TZ/FD**

- Status of Dispute

**USFWS Update**

**RMZ/PB**

- Environmental Restoration Issues with Transfer Schedule Impact
- USFWS Comments on Documents

**EPA – Non-CERCLA**

- Update on Phytoforensics Study

**TS**

**Adjourn**

**ACRONYM LIST**

<b>DERP-</b>	<b>Defense Environmental Restoration Program</b>
<b>EPA-</b>	<b>Environmental Protection Agency</b>
<b>FS-</b>	<b>Feasibility Study</b>
<b>IRP-</b>	<b>Installation Restoration Program</b>
<b>ITS-</b>	<b>Intertek Testing Services</b>
<b>LHAAP-</b>	<b>Longhorn Army Ammunition Plant</b>
<b>MMRP-</b>	<b>Military Munitions Response Program</b>
<b>MNA-</b>	<b>Monitored Natural Attenuation</b>
<b>PB-</b>	<b>Paul Bruckwicki</b>
<b>PBC-</b>	<b>Performance Based Contract</b>
<b>PS-</b>	<b>Praveen Srivastav</b>
<b>QA-</b>	<b>Quality Assurance</b>
<b>QC-</b>	<b>Quality Control</b>
<b>RMZ-</b>	<b>Rose M. Zeiler</b>
<b>RD-</b>	<b>Remedial Design</b>
<b>ROD-</b>	<b>Record of Decision</b>
<b>SAP-</b>	<b>Sampling and Analysis Plan</b>
<b>TCEQ-</b>	<b>Texas Commission on Environmental Quality</b>
<b>USFWS-</b>	<b>United States Fish and Wildlife Service</b>




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**Subject:** **Draft Final Minutes, Monthly Managers Meeting,  
Longhorn Army Ammunition Plant (LHAAP)**

**Location of Meeting:** **Teleconference**

**Date of Meeting:** **February 21, 2012; 10:00 AM – 11:00 AM**

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**Meeting Participants:**

**BRAC:** Rose M. Zeiler  
**USACE-Tulsa:** John Lambert, Wendy Lanier  
**USAEC** Marilyn Plitnik  
**Shaw:** Kay Everett  
**USEPA Region 6:** Steve Tzhone, Rich Mayer  
**USGS:** Kent Becher  
**TCEQ:** Fay Duke, Dale Vodak  
**USFWS:** Paul Bruckwicki, Barry Forsythe

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**Welcome**

**Rose M. Zeiler**

**Action Item Status**

**Army**

- Review LHAAP-18/24 logs from recent soil sampling. Pending.
- Methylene Chloride Degradation. Pending.

**TCEQ**

- Review LHAAP-18/24 soil sampling results. Pending.

**EPA**

- Review LHAAP-18/24 soil sampling results. Pending.
- Methylene Chloride Degradation. Completed.

**Shaw**

- Provide monitoring well coordinates from LHAAP-16 and LHAAP-17 to EPA. Completed

**Defense Environmental Restoration Program (DERP) PBC Update**

**Shaw**

*Document Status/ Environmental Sites (Table)*

- LHAAP-03: TCEQ comments received. RTCs are being prepared. EPA comments are pending.
- LHAAP-04: Response to regulatory comments is being prepared on the Draft Feasibility Study.
- LHAAP-12 RA(O) Years 1 and 2: TCEQ comments received and responses in preparation; awaiting EPA comments. EPA indicated they had no comments and would send an email.
- LHAAP-12 RA(O) Years 3 and 4: TCEQ comments in preparation; awaiting EPA comments. EPA indicated they had no comments and would send an email.

*Groundwater Treatment Plant*

The GWTP is functioning normally. Typical maintenance activities conducted. The treated effluent water is being discharged to the burning ground (via sprinkler system) and injected in ICTs.

*Path Forward for ECO.*

EPA will be sending comments on ITS data. Army clarified that Shaw would be responding to those comments, but under a separate contract vehicle and not with the current contract.

**DERP Total Environmental Restoration Contract Update****Army***LHAAP-37 Well Installation*

Wells have been installed, developed, and sampled. These wells were needed to fully define and help establish and design their monitoring network for the demonstration. They expect to get data from the wells by the end of the week.

*Pilot Demonstration at LHAAP-37 Status*

No change in status. The work plan will be available in February and everything still is on schedule.

**MMRP Update****Army***Update IRP Metals Issue*

Nothing new to discuss.

**Programmatic Issues***Status of Dispute*

Because the dispute is expected to go on to the next level and the public should be notified in accordance with the FFA, Rose suggested sending a letter from the RAB Army co-chair highlighting the issues in paragraph form to the RAB members explaining the issues. Fay and Steve agreed – both will be given the opportunity to review the letter before it is sent.

**USFWS Update***Environmental Restoration Issues with Transfer Schedule Impact.*

Nothing was discussed.

*USFWS Comments on Documents.*

No issues on documents.

**EPA – Non-CERCLA**

EPA would like to set up some time with stakeholder to address a list of questions from CLI before the next RAB meeting.

Steve discussed asbestos demolition issues and method types that were conducted at Longhorn. The type of method was discussed. Asbestos removal documentation can be found in the administrative record.

**Other***Update on Phytoforensics Study*

This is still on schedule for sampling.

The next meeting date is scheduled for March 27, 2012 at 10:00 AM.

## **Meeting Adjourned**

### **Action Items**

#### **Army**

- Review LHAAP-18/24 logs from recent soil sampling.
- Methylene Chloride Degradation.

#### **TCEQ**

- Review LHAAP-18/24 soil sampling results.
- 

#### **EPA**

- Review LHAAP-18/24 soil sampling results.

#### **Shaw**

- Review LHAAP-18/24 logs from recent soil sampling to determine if logs show interface between native soil to the fill material.



**Status of Sites and Technical Documents  
Longhorn Army Ammunition Plant – PBC Contract  
February 21, 2012**

No.	Document in Progress	Submittal Date	Army	Regulator	Next Submittal	Expected Date	Army	Regulator	Comment Resolution	Status	Remarks
1	Preliminary Draft EE/CA, LHAAP-03	9/29/11	x		Final	2/15/11	x	x		TCEQ comments received. RTCs being prepared. EPA comments pending.	
2	Draft Feasibility Study, LHAAP-04	11/03/11	x	x	Final	2/15/11	x	x		Regulatory comments received. RTCs being prepared.	
3	Draft LHAAP-12 RAO Report – Year 1 & 2	2/10/11	x	x	Final	2/15/12	x	x	continuing	Received TCEQ comments. Waiting on EPA comments.	
4	Draft LHAAP-12 RAO Report – Year 3 & 4	12/8/11	x	x	Final	2/15/12	x	x	continuing	Received TCEQ comments. Waiting on EPA comments.	