# LONGHORN ARMY AMMUNITION PLANT

# KARNACK, TEXAS

# ADMINISTRATIVE RECORD

# VOLUME 5 of 5

# 1993

**Bate Stamp Numbers**
**007323 - 007334**

*Prepared for:*

**Department of the Army**
**Longhorn Army Ammunition Plant**
**Marshall, Texas 75671-1059**

**1995**

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

*VOLUME 5 of 5*

*1993*

A. Title: Letter - Subject: Draft Pilot Study Work Plan For Unlined Evaporation Pond At Burning Ground No. 3
Group(s): Early Interim Action At Burning Ground No. 3
Site(s): LHAAP-18 & LHAAP-24 Burning Ground / Washout Pond & Unlined Evaporation Pond
Location: Longhorn Army Ammunition Plant, Marshall, Texas
Agency: U.S. Army Corps Of Engineers, Tulsa District
Author(s): Lawrence J. Sowa, Lieutenant Colonel, U.S. Army
Recipient: Ms. Lisa Marie Price, Environmental Protection Agency
Date: December 13, 1993
Bate Stamp: 007323

B. Title: Letter - Subject: EPA's Comments On Draft Field Summary Report For Group No. 1
Group(s): 1
Site(s): LHAAP-1 Inert Burning Grounds
LHAAP-11 Suspected TNT Burial Site At Avenues P & Q
LHAAP-27 South Test Area
LHAAP-XX Ground Signal Test Area
Location: Longhorn Army Ammunition Plant, Marshall, Texas
Agency: Environmental Protection Agency
Recipient: Lawrence J. Sowa, Lieutenant Colonel, U.S. Army
Author(s): Lisa Marie Price, Environmental Protection Agency
Date: December 15, 1993
Bate Stamp: 007324 - 007326

C. Title: Letter - Subject: EPA's Comments To Draft Pilot Study Work Plan For Unlined Evaporation Pond At Burning Ground No. 3
Group(s): Early Interim Action At Burning Ground No. 3
Site(s): LHAAP-18 & LHAAP-24 Burning Ground / Washout Pond & Unlined Evaporation Pond
Location: Longhorn Army Ammunition Plant, Marshall, Texas
Agency: U.S. Army Corps Of Engineers, Tulsa District
Author(s): Ms. Lisa Marie Price, Environmental Protection Agency
Recipient: Lawrence J. Sowa, Lieutenant Colonel, U.S. Army
Date: December 28, 1993
Bate Stamp: 007327 - 007334

DEPARTMENT OF THE ARMY
LONGHORN/LOUISIANA ARMY AMMUNITION PLANTS
MARSHALL, TEXAS 75671-1059

007323

December 13, 1993

REPLY TO
ATTENTION OF

SMCLO-EN (200-1a)

U.S. Environmental Protection Agency
Superfund Enforcement
ATTN: Ms. Lisa Price
1445 Ross Avenue
Dallas, Texas 75202

Dear Ms. Price:

Enclosed are two copies of the Draft Final Project Plan for Phase II (Pilot Study) at Burning Ground #3 and the Unlined Evaporation Pond (LHAAP 18 & 24) in Longhorn Army Ammunition Plant (LHAAP).

Please review and send your comments back to us by 28 December 1993.

If there are any questions, please contact Mr. Lynn Muckelrath, (903)679-2980.

Sincerely,

Lawrence J Sowa
Lieutenant Colonel, U.S. Army
Commanding Officer

Enclosures

DEC 15 1993

**CERTIFIED MAIL: RETURN RECEIPT REQUESTED**

Lieutenant Colonel Lawrence J. Sowa 239 546 124
Commanding Officer, U.S. Army
Longhorn Army Ammunition Plant
Marshall, Texas 75671-1059

Lynn Muckelrath, Project Manager 104 195 176
Longhorn Army Ammunition Plant
Attn: SMCLO-EN
Marshall, Texas 75671-1059

Dear Colonel and Lynn:

Pursuant to the Federal Facilities Agreement (FFA) for the Longhorn Army Ammunition Plant, EPA's comments on the Ebasco draft Field Investigation Summary Report dated November 1993, for Group #1 sites are identified in this letter.

EPA's comments are to address conceptual issues contained within the Ebasco draft Field Investigation Summary Report for Group #1. As this document does not meet the criteria of a Site Characterization Summary Report, EPA's comments should not be considered to fully address site characterization issues at the Longhorn Army Ammunition Plant or any of the Group #1 sites. Please refer to chapter 3 of the Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA, Interim Final (EPA/540/G-89-004, OSWER Direction 9355.3-01, October 1988) to find what constitutes site characterization and what more fully reflects the intent of this secondary document pursuant to the FFA, Section VIII. (Consultation with EPA and [TNRCC]), paragraph D.

EPA's comments are as follows:

| | |
|---|---|
| Determination of Background Concentrations of Naturally Occurring Constituents | The intention of identifying background sample locations for each of the 6 sites during the scoping of the approved RI/FS Work Plan dated June 1992, was only to determine what constituents (naturally occurring and man-made/induced) existed at the site under investigation and what constituents possibly were emanating or migrating from other site(s) in close proximity to the site under investigation. The background sample locations and the information generated from the locations was never intended to be used to characterize "background" for the Longhorn AAP facility. Furthermore, to arbitrarily assign "regional background concentrations for metals in soils" based solely on literature is unacceptable. Background samples are to be collected from areas on the facility not affected by contamination but that do have the same basic characteristics. Proper identification of ground and surface water flow direction and wind direction are key and determination of the proper background sample population size is essential. At this point in this investigation these key elements in determining background are not known. Based on conversations with your staff and with the COE, possibly useable background information has been collected. However, until such time as this information is presented to and approved by EPA and TNRCC, the issue of the characterization of background is unresolved. |
| Regulatory Standards presented on page 17 in Table 5 | Lead is identified in the context of MCLs and MCLGs. The MCLG for lead is 0 and is properly identified in the table, however, the Lead and Cooper Regulation (40 CFR 141 Subpart I) establishes the action level of 0.015 mg/l. Therefore, 0.015 mg/l is not the MCL for lead. |
| Ground Water Grab Sample Locations | Neither the text nor tables identify from which borings the ground water grab samples were collected. |

| | |
|---|---|
| QA/QC | The presence of butyl benzyl phthalate detected in soil at the Site LHAAP 14 (Suspected Burial Area) and the presence of RDX detected in ground water at Site LHAAP 27 (South Test Area) should be discussed in terms of confirmation testing within the QA/QC protocol, given that these chemicals can be detected in error by laboratories. As discussed with you and your staff and the COE on December 8, 1993, confirmation of the presence of these contaminants should be planned or the presence of these contaminants in terms of the potential risk should be evaluated. |

If you have any questions about EPA's comments or any other matter, please contact me at (214) 655-6744.

Sincerely,

Lisa Marie Price
Remedial Project Manager
Superfund Texas Enforcement

cc: Tulsa District Corps of Engineers **VIA FAX**
P.O. Box 61
Attn: Mr. Ross Nyugen
CESWT-PP-E
Tulsa, OK 74121-0061

Mike Moore, Superfund
Texas Water Commission
P.O. Box 13087
Capital Station
1700 N. Congress Avenue
Austin, TX 78711-3087

007327

DEC 28 1993

**CERTIFIED MAIL: RETURN RECEIPT REQUESTED** P 104 195 146

Lieutenant Colonel Lawrence J. Sowa
Commanding Officer, U.S. Army
Longhorn Army Ammunition Plant
Marshall, Texas 75671-1059

Lynn Muckelrath, Project Manager
Longhorn Army Ammunition Plant
Attn: SMCLO-EN
Marshall, Texas 75671-1059

Dear Colonel and Lynn:

Pursuant to the Federal Facilities Agreement (FFA) for the Longhorn Army Ammunition Plant, EPA's comments on the Draft Final Project Plan for the Phase II Pilot Study for IRA site LHAAP 18 & 24 - Burning Ground 3 & The Unlined Evaporation Pond dated December 1993.

EPA's comments are as follows:

| | |
|---|---|
| Section 2.1.2 | Given the saturated and soft subsurface conditions at the LHAAP facility, will a gravel bed be able to withstand the load pressure of roll-off bins and the trucks delivering and removing them? |
| Section 2.2.3 | As roll-off bins are not water tight, do you intend to line the roll-off bins with a synthetic chemically-resistant material to prevent leakage of liquid during soil storage? |
| Section 3.0 | The text states that each extraction facility will have extraction pumps "sized to handle the expected flow". If encountered, will the pumps be capable of pumping fluids denser than water (i.e., DNAPL)? |
| Section 3.1.1 | Replace last sentence with "The ICT will cut through the layers and provide an avenue for the DNAPL and contaminated water to be collected and removed for temporary storage." |

| | |
|---|---|
| Section 3.1.3 | Fifth sentence: Text states that the ICT "...will have a minimum discharge capacity of 15 gallons/minute/foot..." Does this statement actually refer to the influent capacity of the ICT or the expected effluent quantity? Please clarify. |
| Section 4.1 | Second paragraph: Delete "...**prior to testing**" as it makes the paragraph is unclear. |
| Section 4.1.1 and 4.2.2 | "...**and water level readings from 22 surrounding wells will be monitored...**" Which wells will be monitored? What criteria will determine which wells will be monitored? |
| Section 4.1.2 | Fourth sentence: Replace "...should be capable of pulling a minimum 12 inches of mercury..." with "...<u>should be capable of pulling a maximum of 12 inches of mercury</u>..." |
| Section 4.1.2 | Second to last sentence: Replace with "<u>Vapors from the extraction system will be sampled and analyzed to determine contaminants and contaminant concentrations and the vapors will directed through an activated carbon filter.</u>" The frequency of the sampling should be specified. |
| Section 4.2 | State the purpose of the analytical tests to be performed on the water samples. |
| Section 4.2.1 | **"A sample should be taken every day during the 10 day pumping and equalization period. During the actual flow test one sample should be taken each day from each extraction facility for laboratory analysis."** The text should specify that a grab sample <u>will</u> be taken from each of the extraction wells and ICT during the pumping period. Does this mean that a sample will be taken during the 10-day pumping as well as during the minimum 1-week equalization period? The text should reflect this. How will the samples be collected from the ICT and the extraction wells during the equalization period? |
| Section 4.3 | Please state the purpose of the analytical tests to be performed on the soil samples. |

If you have any questions about EPA's comments or any other matter, please contact me at (214) 655-6744.

Sincerely,

Lisa Marie Price
Remedial Project Manager
Superfund Texas Enforcement

cc: Tulsa District Corps of Engineers **VIA FAX**
P.O. Box 61
Attn: Mr. Ross Nyugen
CESWT-PP-E
Tulsa, OK 74121-0061

Mike Moore, Superfund
Texas Water Commission
P.O. Box 13087
Capital Station
1700 N. Congress Avenue
Austin, TX 78711-3087

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John Hall, *Chairman*
Pam Reed, *Commissioner*
Peggy Garner, *Commissioner*
Anthony Grigsby, *Executive Director*

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# TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

*Protecting Texas by Reducing and Preventing Pollution*

January 11, 1994

**CERTIFIED MAIL**

**RETURN RECEIPT REQUESTED**

Lynn Muckelrath, Project Manager
Longhorn Army Ammunition Plant
Attn: SMCLO-EN
Marshall, Texas 75671-1059

Re: Longhorn Army Ammunition Plant
Field Investigation Summary Report -- Group I Sites

Dear Mr. Muckelrath:

The Texas Natural Resource Conservation Commission (TNRCC) staff have completed our review of the "Field Investigation Summary Report" for Group I sites, dated November 1993. Our comments, which include recommendations for scoping of Phase II activities, are enclosed. I've kept the comments fairly brief, since most of this information was discussed at the December project managers' meeting.

If you have any additional questions or comments, please contact me at (512) 239-2483.

Sincerely yours,

Michael A. Moore
RI/FS II Unit
Superfund Investigation Section
Pollution Cleanup Division

MM:

Enclosure

cc: Capt. Ross Nguyen, COE Tulsa District
Lisa Price (6H-ET), EPA Region VI
Bud Jones, LEGAL/FO - Region 5/Tyler
Mark Weegar, WASTE/IHW - Corrective Action

TNRCC Comments
on
Longhorn Army Ammunition Plant
Remedial Investigation
Field Investigation Summary Report
(Group I Sites)

| Section | Page | Comment |
|---|---|---|
| 2.1 | 7 | We do not have a copy of Ebasco, February 1992 or Ebasco, October 1993. The Ebasco "Chemical Data Acquisition Plan" and "Sampling and Data Results Report" received by TNRCC are dated December 1992 and July 1993, respectively. |
| 2.1 | 7 | I could not find the individual sample data for pH and conductivity. Please identify where these data are reported, or furnish them if they have not yet been submitted for our review. |
| 2.4 | 11 | Were the soil samples composited, or homogenized? |
| 2.5 | 12 | Please provide drilling logs and well construction data for the five existing monitoring wells which were sampled as part of this investigation. |
| 3.0 | various | The data tables include useful statistical information which may eventually be used in the risk assessment, but do not include enough information for TNRCC staff to evaluate the spatial distribution of contaminants at the sites investigated. It is requested that additional tables of data be included in the RI report to list **all** of the analytical results for constituents which were detected in a particular medium at a particular site (*i.e.* exclude only the constituents for which no "hits" were detected at the site). An example of such a table is attached at the end of these comments. |

| Section | Page | Comment |
|---|---|---|
| 3.1 | 14 | We concur with EPA's comments regarding "background". As discussed during the project managers' meeting on 8 and 9 December, an acceptable method for determining background concentrations of metals and other inorganic parameters must still be developed before comparisons between site-specific sample data and background can be made. |
| 3.1 | 14-18 | Texas ground water and surface water standards, and risk reduction standards must be included as chemical-specific ARAR's. |
| 3.2 | 21-27 | It is noted that sample LHAAP11-GG-04 was the only sample from the six sites investigated in Group I to have a detectable concentration of 1,3,5-TNB. This sample also had greater than two times the nitrate/nitrite concentration of the other saturated zone samples from this site. These findings could indicate that TNT waste is indeed present in the vicinity of the intersection of avenues 'P' and 'Q', but that it may not be in the particular location that has received most of the investigative efforts to date (*i.e.* in the north-east quadrant of the intersection). It is recommended that the Phase II investigation of this site include investigation of ground water in the uppermost saturated zone so that in the event that a contaminated plume is encountered, it may be traced to the source. Additionally, the apparently elevated sulfate concentrations in the vicinity of SB-05 and SB-06 should the investigated during Phase II. |
| 3.2 | 23 | The box in Table 8 for the median concentration for nickel appears to contain a typographical error. |

| Section | Page | Comment |
|---|---|---|
| 3.3 | 33 | It is noted that the chloride concentrations in samples from the monitoring well at site LHAAP-13 are nearly two orders of magnitude greater than for samples from the well across the street at LHAAP-14. Sulfate and conductivity are also higher at LHAAP-13 than at LHAAP-14. It appears that additional investigation of the ground water in the LHAAP-13/14 area is warranted to determine the source of the elevated chloride and sulfate. |
| 3.6 | 53 | It is noted that acetone was detected in soil samples from SB-19. As discussed during the project managers' meeting on 8 and 9 December, additional investigation of this area should be conducted to verify the presence of volatile organics. |
| 3.7 | 66 | It is noted that nitrobenzene and RDX were detected in the saturated zone samples from SB-33, and that nitrate-nitrite appears to be elevated in SB-38. It is recommended that additional ground water investigation be focused in these areas during the Phase II RI. |

**Table __. LHAAP 11 Groundwater Grab Samples.**
**Summary of Positive Analytical Results -- All Parameters.**

| PARAMETER | SAMPLE | | | | | |
|---|---|---|---|---|---|---|
| | GG-01 | GG-02 | GG-03 | GG-04 | GG-05 | GG-06 |
| **EXPLOSIVES (ug/l)** | | | | | | |
| 1,3,5-TNB | <0.10 | <0.10 | <0.10 | 0.62 | <0.10 | <0.10 |
| | | | | | | |
| **ANIONS (mg/l), pH, CONDUCTIVITY (umhos/cm)** | | | | | | |
| Chloride | 34.5 | <1.0 | 8.9 | <1.0 | <1.0 | 17.7 |
| Nitrate-nitrite | 0.11 | 0.02 | 0.5 | 1.23 | 0.6 | 0.6 |
| Sulfate | 96 | 72 | <1 | 13 | 590 | 1400 |
| pH | | | | | | |
| Conductivity | | | | | | |
| | | | | | | |
| **TOC (mg/l) and TOX (ug/l)** | | | | | | |
| TOC | 2.4 | 2.2 | 1.5 | <1.0 | <1.0 | 28 |
| TOX | 40 | 34 | 44 | <5 | <5 | 87 |